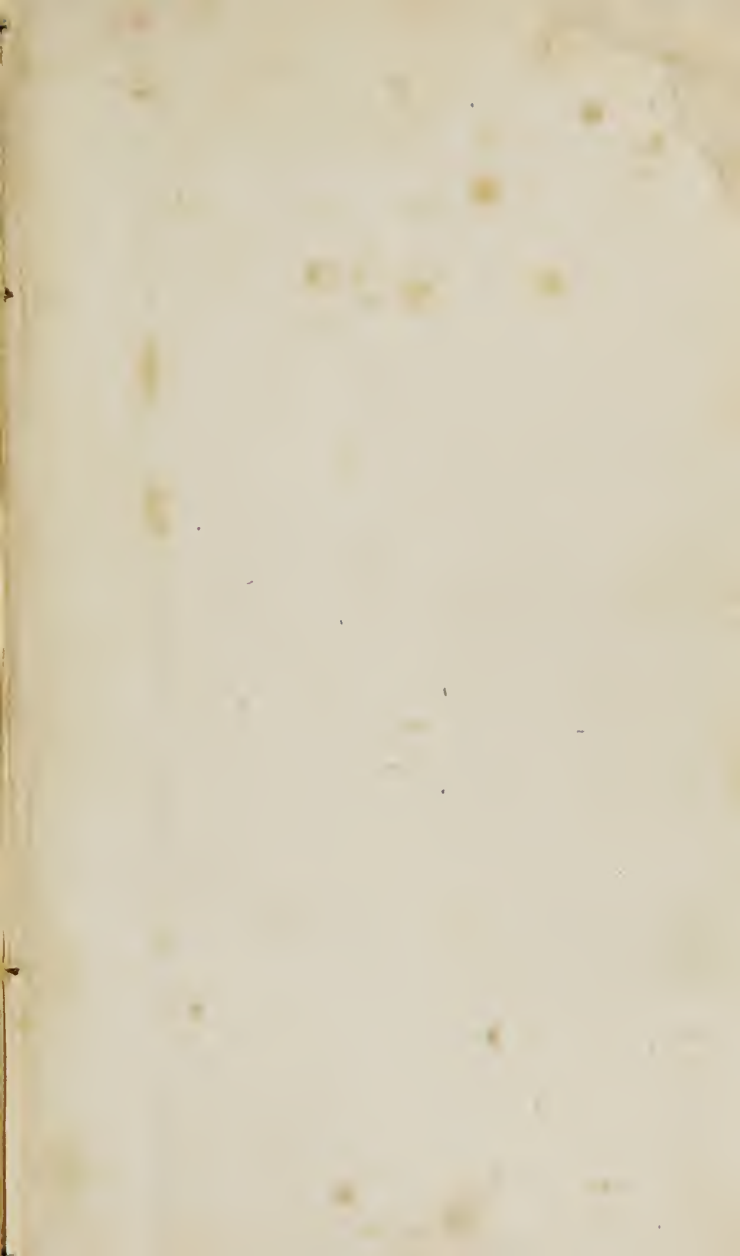


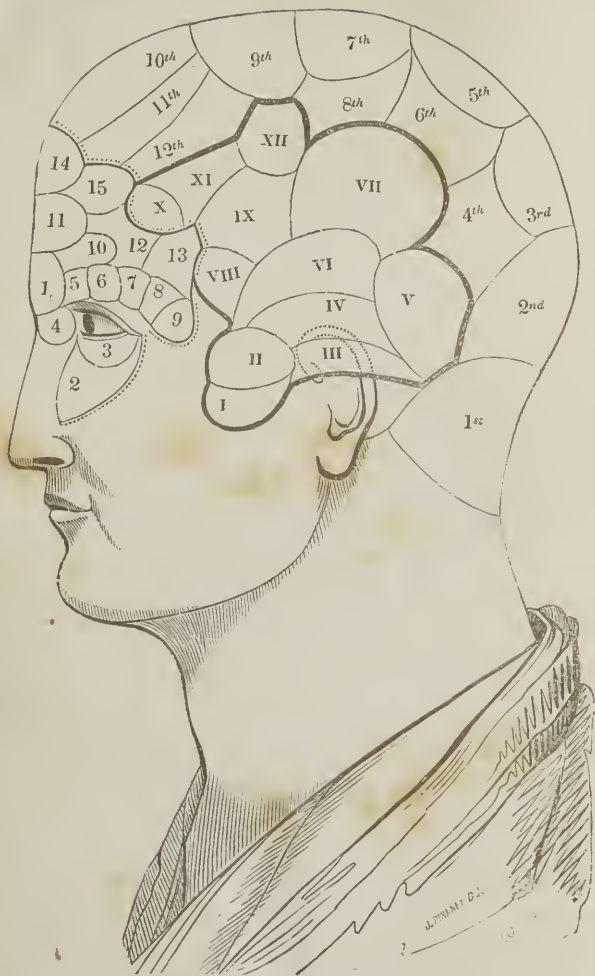
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PHRENOLOGICAL BUST.

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A
NEW SYSTEM
OF
PHRENOLOGY.

BY J. STANLEY GRIMES,
President of the Western Phrenological Society, at Buffalo.

To him who in the love of nature holds
Communion with her visible forms, she speaks
A various language.—*Bryant.*

BUFFALO:
OLIVER G. STEELE.
NEW-YORK: WILEY & PUTNAM.

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1839

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PREFACE.

THE principal object of this volume is, to lay before the public the results of several years' phrenological study and observation. When I commenced teaching phrenology, I followed in the footsteps of Gall and Spurzheim. My only object was, to disseminate among my fellow countrymen, the sublime truths which were discovered by those illustrious men. I adopted their doctrines, and imitated, as well as I could, their manner of teaching and illustrating them. I also adopted their favorite maxim, that we should study things rather than words—"res non verba quæso." I determined to admit nothing which was not based upon facts, and capable of being philosophically demonstrated. It was by observation, that I first satisfied myself of the truth of the essential facts upon which the system of Spurzheim was based; and by continuing to pursue this same course, I have been enabled, as I believe, to remodel and improve that system. Admonished by the history of the past, it is without any feeling of presumption, that I present to the notice of the scientific public my New System of Phrenology; conscious that it must contain many errors which future experience and just criticism cannot fail to detect. I appeal with confidence to the justice and candor of phrenologists. I invite their criticisms as a favor; and when I am convicted of error, either in facts or conclusions, I shall take great pleasure in making acknowledgements. It is my intention to correct, in a future edition, all mistakes that I shall discover in this; and shall be happy to receive judicious communications,* from any quarter, which may be calculated to advance a science in which I feel so deep an interest. I have made a free use of the works of my predecessors, and have given credit accordingly. I should state however, that after the articles on

*Communications on the subject of Phrenology, addressed to me at Buffalo, during my absence, will be referred to the Executive Committee of the Phrenological Society, and receive from them all due attention.

X and III were printed, I received from my friend, Dr. Ganson, of Batavia, N. Y., a copy of "Brousais' Phrenology," published in 1836, in French, and I am happy to find that he coincides with me in attributing X to animals. From him I also learned, for the first time, that Vimont considers Vitativeness as a propensity to preserve the body—"to avoid danger without reflection," and locates it where I do III. The idea, however, that it is the organ which feels pain, does not seem to have occurred to him.

Brousais has attempted, when speaking of each organ, to show with what other organs it naturally combines, and also which are natural antagonists. But, although I have taken some trouble to show that certain organs naturally act together, I cannot countenance the idea that some organs were intended as antagonists to others. They all act in harmony; and though some are more intimately related than others, no one, unless abused, counteracts the proper effects of another. Brousais also, in common with all other phrenologists, has adopted the classification of Spurzheim, and therefore, whatever merit or censure may be accorded to the innovations contained in this volume belongs to the author alone. Spurzheim remarked, that the organs of analogous powers are regularly in each other's vicinity. He observed that the first four Socials, and also several of the lower Ipseals are related. Other Phrenologists have been struck with the same facts; but the well informed reviewers will perceive, that nothing like the classification in this work has ever before been attempted; and I leave it to them also to determine how far I have been successful.

INTRODUCTION.

THE study of human nature has in all ages been deemed of the very first importance, and called into vigorous action the master minds of every civilized nation. But the numerous systems that have been successively produced and abandoned, afford sufficient evidence that the great fundamental principles of human nature had never been discovered. Some philosophers have shut themselves in their closets, and endeavored, by reflecting upon the operations of their own minds, to frame a system of mental philosophy, which would apply to all mankind: but the result was, that they only acquired an imperfect history of a few of their *own* mental powers, while they remained in total ignorance of the causes which produce the great diversity of human character. Others endeavored to acquire a knowledge of man by travelling, and mingling with all classes and conditions of the human race. These were more successful; but however much knowledge might, by the experience of a whole life, be acquired in this manner, it necessarily died with the individual, as it was of such a nature that it could not be communicated. Anatomical investigation, was another mode of studying human nature; but although this led to more correct notions concerning the functions of the body, it shed no light upon the nature of the mind.

The study of Physiognomy, is another method which has been pursued, from the time of Aristotle, Theophrastus, and Zopyrus, among the ancients, to the attempts of Camper and Lavater in our own day. But all the real success which has ever attended the labors of physiognomists, is owing to their approximation to the great truths of Phrenology; though they were utterly ignorant of this science. By examining the works of Camper and Lavater, it will be found, that the few useful truths which they contain, are based upon the principles which are explained in this work.

The foundation of Phrenological science, was laid by the discoveries of F. J. GALL, a native of Germany, who was born March 9, 1757. His attention was first directed to the subject while a school-boy, from the circumstance, that those who committed the words of their lessons to memory with the greatest ease, had *prominent eyes*. He next observed that those who excelled in the memory of places, had a peculiar prominence upon the forehead. After he left the University, he commenced the practice of medicine. He was now a man of science—his very profession led him to study human nature in connection with the human constitution—and he began to reflect—"If the prominence of one part of the head indicates one talent, and the prominence of another part indicates another, may not all the talents and dispositions of men be indicated by the developement of different parts of the head?" The suggestion seemed plausible; and he accordingly, after having in vain examined all the different authors on mental philosophy, betook himself to the observation of the heads of peculiar characters. He was successful, even beyond his most ardent hopes; for he soon discovered external indications of talents for painting, poetry, and the mechanic arts, besides several of the moral and animal propensities. Gall's first publication on the subject, was made in 1798. He very naturally failed to give system to the facts which he had discovered; and the names which he gave to the organs were unphilosophical. In 1801, fortunately for the science, John Gasper Spurzheim, also a German, became the pupil of Gall, and in 1804 was admitted as his partner. Spurzheim greatly improved the nomenclature and classification of the organs; and also contributed much towards giving a more philosophical account of the anatomical structure of the brain.

In 1802, the lectures of Dr. Gall at Vienna, which had continued during five years, were prohibited by an order of the government, obtained through the influence of the clergy. In 1805, Gall and Spurzheim left Vienna, and travelled to some of the other cities of Europe, lecturing upon, and disseminating their doctrines. In 1807, Gall arrived at Paris, and remained there until his death, which took place in 1823.

Spurzheim dissolved his partnership with Gall in 1813, and in 1814 visited Great Britain, and lectured in the principal cities. During his visit to Edinburgh, he had the good fortune to make a convert of Geo. Combe, Esq., a gentleman who has since distinguished himself as an able and eloquent phrenological author and lecturer. In 1817, Spurzheim returned to Paris. In 1824, the lectures of Gall and

Spurzheim at Paris, were prohibited by an order of the government. Spurzheim again visited Great Britain in 1825, where he afterwards spent most of his time until June 20, 1832, when he sailed from Havre, and arrived at New York, August 4. He remained in New-York until the 11th, when he proceeded to New-Haven. On the 16th he left for Hartford, and from that city he went to Boston, where he arrived on the 20th. He gave a course of lectures in Boston, and another at Cambridge. This was the last labour of Spurzheim in the cause of science. A slow, continued fever, not at first considered dangerous, finally proved fatal, and he died at Boston, Nov. 10, 1832. No man was ever more sincerely lamented. To the honor of my native city, the most distinguished tokens of love and regard were extended to him while living, and the highest testimonials of grateful reverence followed him to the grave. His beautiful monument at Mount Auburn, is but an emblem of the pure affection with which his memory is cherished. The marble may perish, and the place of his burial be forgotten; but the names both of Gall and Spurzheim are immortal. They must always be associated with principles, that will be known and appreciated, while science has a temple or a devotee on the earth.

PHRENOLOGY.

CHAPTER I.

GENERAL PRINCIPLES OF THE HUMAN CONSTITUTION.

PHRENOLOGY is the science of the human mind, founded upon the human constitution.

The human constitution is composed of a vast number of organs, intimately related to each other, and all acting together in the most perfect and beautiful harmony.

Notwithstanding the exalted nature of man above all the animated tribes

“That roam the wood,
Or wing the sky, or roll along the flood,”

yet, as an organized being, he is subject to the same laws that regulate the rest of the animal and vegetable creation.

The organs which compose the human constitution are so numerous, and complicated, and the offices that they perform so different, that it would be impossible to form any correct idea of them, without classing together those which perform similar functions, and considering them as distinct and par-

tially independent systems. Thus the bones are denominated the

OSSEOUS SYSTEM,

and constitute the frame upon which the other organs are supported. But the bones cannot move without the agency of the muscles: these constitute another class of organs, denominated the

MUSCULAR SYSTEM.

Those who are not familiar with anatomical expressions will have a perfect idea of the structure of a muscle, when they are informed that all the lean parts of flesh and fish are entirely composed of muscles, the parallel fibres of which extend from one bone to another, and possessing, as they do, the power of contracting with great force, they are capable of moving the bones from one place to another, as far as the tendons will permit. This principle of the contractility of muscles is of the greatest importance, since every motion of the body, and every sign of life which we are capable of making, is made by the contraction of one or more of the muscles. Not only are the movements of the body, the pulsation of the heart, the circulation of the blood, and the action of the stomach and intestines, dependent upon the construction of the muscles, but also the manifestations of the mind—probably even thought itself—but certainly the signs, the manifestations, the evidences of thought, are dependent upon muscular contraction.

This dependence of the mind upon the muscles, is perfectly illustrated by the case of persons that have been in a trance, who, although conscious of what was going on around them, yet could give no sign of consciousness; and their friends, believing them dead, have proceeded to bury them.

An instance of this kind once happened in England, and after the funeral was over the surgeons obtained the body for dissection; but as soon as the knife penetrated the muscles they resumed their power in obedience to the will, and the individual, to the astonishment of the surgeons, arose again and lived several years afterwards.

The muscles are of different sizes and forms according to their situations and the force which it is necessary for them to exert; but notwithstanding they are absolutely necessary to produce motion, yet they never move themselves; they are excited to action by the agency of some part of the

NERVOUS SYSTEM.

Under this head is included,

FIRST, *The nerves of involuntary motion*: these stimulate and excite to action all the muscles that are independent of the will, all that are concerned in digestion, circulation and respiration. These functions proceed incessantly, from the very commencement of our animal existence to the last moment of life—whether we are asleep or awake—without our being conscious of it, and without our being able to prevent it by any act of the mind. These nerves do not originate in the brain.

SECOND, *The nerves of voluntary motion* all originate in the brain, and are under the control of the will. They are the messengers which convey to the muscles the decisions of the mind; they cease to act when separated from the brain, and are evidently mere instruments of communication between the brain and the muscles.

Whenever the mind determines to act, the voluntary nerves receive an influence from the brain, and quick as lightning convey it to the appropriate muscles, which

instantly contract and produce the action. Thus, if we wish to speak—the brain conveys, through the medium of the voluntary nerves, an influence (probably some kind of electric fluid) to the muscles of the tongue, throat, lips, &c., and instantly they contract, producing the requisite sounds.

THIRD, *The brain or phrenological nerves.* The consideration of this division of the nervous system, constitutes the science of Phrenology in its most limited sense.

FOURTH, *The nerves of the five senses* convey impressions to the brain from the external world: the optic nerve conveys impressions of light; the auditory nerve, of sound; the gustatory nerve, of savors; and the olfactory nerve, of odors; while the nerves of touch extend from all parts of the body and head, an infinite number of exceedingly minute branches, conveying to the brain impressions of cold, heat, pain, and mechanical pressure.

Thus we have seen that the bones cannot move unless acted upon by the power of the muscles; and that the muscles are incapable of acting until they are excited by the nerves; while the nerves are dependent upon the brain; and the brain is excited by the five senses; which in their turn are stimulated to action by the external world.

These three classes of organs, the bones, the muscles, and the nerves, constitute the most essential part of the human constitution. All the other systems of organs are merely auxiliary to these, and conducive to their nourishment and support. They may be divided into the

DIGESTIVE SYSTEM,

that receives the food and manufactures into blood; the

ARTERIAL SYSTEM,

that conveys the blood to every part of the constitution; and the

VENOUS SYSTEM,

that returns it again to the lungs.

CHAPTER II.

TEMPERAMENT—OR PROPORTION OF THE SYSTEMS.

WHEN all the systems which compose the constitution are perfect in form, and size, and vigour, the individual may be said to possess

A BALANCED TEMPERAMENT.

But this perfect proportion of parts is rarely found, except in the imagination of the poetical. The Apollo Belvidere, and the Venus de Medicis, and many other statues, have been executed with the intention of representing the perfection of all the parts of the human constitution combined in one subject. Shakespeare makes Hamlet represent his father as being endowed with such perfection; a constitution “whereon every god* had set his seal, to give the world assurance of a man.”

When one system of organs predominates over the rest,

* The ancients believed that a particular Deity presided over each part of the body.

its influence may be observed in every part--producing a modification of the form, size, texture, or complexion, and varying the degree of activity and energy with which the organs of the brain perform their functions.

Each temperament is named after the system of organs, the predominance of which produces it; thus the

MUSCULAR TEMPERAMENT

exists when the muscular system is developed in a greater degree than the other systems. This temperament is known by the firmness which it imparts to the flesh, the harshness to the expression of the countenance, and the strength, to the body generally.

The osseous or bony system is frequently large, while the muscular is small, and the contrary; but since they both tend to the same result, and combine to produce strength, I shall associate the two systems under the head of muscular temperament.

Hereules, Ajax, Wallace, and Ethan Allen, are fine illustrations of it. We find it in the inhabitants of the rough and mountainous districts oftener than in those of the cultivated valleys and plains. It is also seen in the majority of labourers who exert themselves to operate by arduous muscular strength. Washington Irving remarks: "There seems to be races of men, as there is of animals, destined by nature to bear burdens": their large bony frames, and thick firm muscles admirably qualify them for usefulness where personal strength and brute force is necessary.

Women seldom are endowed with the muscular temperament, and when they are it gives them a masculine appearance. Catherine, Empress of Russia, is an instance of this. But the majority of the female sex have the osseous and

muscular system small; this is true of animals generally, and cannot therefore be attributed to the delicate habits of women.

NERVOUS TEMPERAMENT.

When that class of organs which constitutes the nervous system predominates, in accordance with the well established principle that size is a measure of power, (all other things being equal,) it will have an influence over the other systems in an exact proportion to its superiority in comparative size.

The Involuntary Nerves, the office of which is to excite certain muscles to action independently of the mind, will certainly have more effect if those muscles are small. The nerves do not however give strength, but only activity. The strength of the muscles depends upon their size, but their activity depends upon the nervous apparatus that excites them. The same remarks are true of

The Voluntary Nerves; and persons of this temperament speak, walk, and perform all their actions with great rapidity. They are well adapted to situations that require great celerity, but where little muscular strength is necessary. When we consider that the voluntary nerves act upon muscles in obedience to the organs of the brain, it is plain that the smaller the muscles are, compared to the exciting power, the more rapid must be their action. And this is actually the case—when the bones and muscles are small, and the nervous system powerful, the limbs and the features (which are composed principally of muscles) move quickly, and are easily excited to sudden actions.

The Brain or Phrenological Nerves also act more powerfully when the muscular system is comparatively small.

The mind never manifests itself but through the muscles; of course, the larger the organs of the brain, and the smaller and more delicate the bones and muscles, the greater will be the effect of the mind upon them.

The same principle explains the activity of the senses. The muscles surround the nerves of the senses, and protect them from external injury; but when the muscles are delicate, and the nervous system powerful, the senses are easily impressed, and rapidly convey impressions to the brain.

The signs of the nervous temperament are, small muscles, and generally small bones; the features delicate and sharp, the eyes small, and the head rather large. This is when the nervous temperament is so far predominant as to be pure.

The *mixture* of temperaments is the cause of great difficulty in ascertaining the true temperament; but much confusion may be avoided by making a broad distinction between the three *essential* systems of organs—the osseous, muscular and nervous—and the three *nourishing* systems—the digestive, arterial and venous; the nourishing systems being important only as they affect the essential systems and modify their power and activity. I deem this a point of great importance, and shall therefore endeavour to state it distinctly and illustrate it clearly.

Were it not for the necessity of nourishment, we should have no need of the three nourishing systems, and the human constitution would be a much more simple machine than it is now. It would then be composed only of three systems. There would still be a necessity for the same bony frame, or osseous system, and of the same contractile muscles, and also of a nervous system to direct the muscles; but all the numerous and complicated organs which conduce to nourishment might be spared. There would then be but

two temperaments—the muscular and the nervous ; if one predominated, the individual would be remarkable for his strength, and if the other, for his activity.

But since we are so constituted that we are continually wasting, it is necessary to have organs to repair the waste; and in pursuing the study of these nourishing organs, it becomes necessary to class them into systems, and consider the effect which each system will have upon the constitution when predominant.

DIGESTIVE OR LYMPHATIC TEMPERAMENT.

First, then, the digestive system when predominant over the arterial and venous, supplies more nourishment than the growth and maintenance of the body requires. The superabundance is deposited in the form of fat between the fibres of the muscles, under the skin, and around the heart, arteries, &c. The muscles receive a useless load, which lumbers them and renders their action more slow and difficult; the arteries do not send the blood with so much vigour and rapidity to the brain; the muscles do not contract so forcibly, and the whole constitution becomes partially clogged. The fat settling under the skin, is the cause that persons of this temperament are pale and dull, as the transparency of the skin admits the colour of the fat to appear through it. It also gives roundness to the features, and covers the muscles and nerves with fat, so as to prevent them from being easily impressed and excited by external circumstances. They are therefore dull of apprehension.

Such persons never can rise to great eminence, even if they possess good mental powers.

These remarks must be understood to apply to extreme cases of the lymphatic temperament; but there are many

degrees of it: in some persons it is manifested in so slight a degree, that it requires close observation to detect it; and this is equally true of the other temperaments.

The female sex generally have so much of the lymphatic as to give a soft and yielding consistence to their flesh, and a roundness to their forms. Combined to the nervous temperament, it gives a peculiar delicacy to the constitution, especially if the osseous and muscular systems are moderately developed. It gives moderation to the movements of the muscles, and adds to their bulk, without increasing their strength. Such persons are easily fatigued, and prefer situations where little exertion is necessary. Cæsar said: "Let me have fat men about me, I like not that lean haggard Cassius." The restless, discontented, revolutionary spirit never inhabits a lymphatic tenement. It may be seen among those who sit in the midst of luxury without being compelled to labour; in market places, in coffee houses, and in the dwellings of idlers.

The lymphatic temperament tends to check the activity of the nervous and muscular systems.

ARTERIAL OR SANGUINE TEMPERAMENT.

When the arterial system is most fully developed, we see the muscles and nerves nourished and stimulated to the highest degree; and as they are the organs that produce motion, the consequence is that such individuals will love to be in motion; they will be fond of all kinds of exercise, and industry will be natural to them. The brain also will be nourished and stimulated to the most energetic action. Individuals of this temperament are well qualified for situations where all the organs, both bodily and mental, can have a share of exercise. They frequently make poor

students, even when they are possessed of good intellectual powers, because study is too confining to them; they cannot keep still long enough to learn their lessons from books, but they will soon learn any operation the performance of which allows them a variety of exercise.

It has also been remarked that persons of this temperament are prone to "sensual pleasure."

By sensual pleasure, is understood, the enjoyment produced by the exercise of the bodily organs—in sporting, dancing, wrestling, boxing, eating, drinking, &c. This proneness will be, in a great degree, modified by the relative development of the phrenological organs.

If a man has combativeness and destructiveness large, he will be fond of hunting, because that will be a kind of exercise that will gratify at once his largest and most active organs, both of brain and body. But if combativeness and destructiveness be very small, an ardent temperament alone will not be sufficient to induce him to chase and destroy innocent animals. Yet if alimentiveness be very large, he will be apt to exercise in eating and drinking. He would make a good landlord, for he would not only be spontaneously active, but he would direct his activity to this particular subject.

It is the organs in the brain that dispose us to pleasure of all kinds; but when the body is highly excited and nourished by the blood, the individual will be likely to use those organs of the brain the gratification of which will give activity to the body; and these are principally alimentiveness, destructiveness, combativeness, amateness and playfulness. It is the gratification of these propensities that constitutes what is meant by the phrase, "sensual pleasure."

The signs of this temperament are, an animated countenance, florid complexion, blue eyes, and yellow or brown hair; the form and features are generally more handsomely

developed, and combined as they are with a rosy complexion, and ardent passionate feelings, young persons of this constitution are more interesting to each other than those of other temperaments.

VENOUS OR BILIOUS TEMPERAMENT.

The partial independence of the different organs and systems of organs of the constitution, has not been sufficiently insisted upon by physiologists. Although it is true that

“All are but parts of one amazing whole,”

yet it is equally true that each system of organs is to a certain extent independent of the other systems.

It is generally taken for granted by authors, that the venous system is in proportion to the arterial, and the two are spoken of as a whole, under the name of the sanguineous system. But after much observation and reflection, I am satisfied that the arterial system sometimes predominates, and sometimes the venous; and that what is called the sanguineous temperament, is produced by the predominance of the arterial system, while the bilious temperament is produced by the predominance of the venous. I see no good reason why the venous or arterial systems may not predominate over each other, as well as the muscular and nervous.

It is undoubtedly true that when the constitution is in perfect harmony, the arterial and venous systems will bear a regular proportion to each other, but this harmony is seldom found.

The truth is, any organ or system of organs in the constitution, may predominate in size over the others. It is upon this principle that the whole science of Phrenology is founded, and it is only upon this principle that temperaments

can be philosophically explained. Strictly speaking, there may be as many different temperaments as there are organs in the constitution, and each of these may be combined so as to produce an infinite variety. This is one reason that there are not two persons in the world alike ; because some organ or combination of organs predominates in one that does not in another. But it is impossible to tell what organ produces the peculiarity in every individual instance ; we are therefore under the necessity of classing together those organs that perform similar functions, and when the whole class predominates in any person, he is said to be of a certain temperament.

In conformity to these views, I have explained the different systems that compose the human constitution, and the temperament that each produces.

SYSTEMS.	TEMPERAMENTS.
1. The Oseous System, }	Muscular.
2. The Muscular, }	
3. The Nervous,	Nervous.
4. The Digestive,	Digestive, or Lymphatic.
5. The Arterial,	Arterial, or Sanguine.
6. The Venous,	Venous, or Bilious.

In order to understand the effects of the venous temperament, the following facts must be borne in mind.

FIRST, The veins contain about two thirds more blood than the arteries.

SECOND, The blood moves much slower through the veins than it does through the arteries.

THIRD, The blood is not so warm in the veins as it is in the arteries.

FOURTH, The blood of the veins is of a much darker color than that of the arteries.

FIFTH, The liver, which secretes or manufactures the bilious fluids, is supplied with blood almost entirely from the veins, and in this respect is an exception to all the other organs of the body.

SIXTH, The venous system is developed in different degrees in different persons.

SEVENTH, The venous system becomes more full as people grow older, and at the same time the arteries shrink. Certain climates also give greater activity to the venous system.

We can now understand why persons of this temperament are found to possess the following peculiarities:

FIRST, They are slower in bodily and mental action than the nervous or arterial temperament.

SECOND, They are not so easily excited nor so soon exhausted.

THIRD, Their feelings are not so warm and ardent, but more enduring.

FOURTH, They are of a dark brown or yellow complexion, with black hair and eyes.

FIFTH, They are more subject to liver complaints, and are said to have a bilious look; this is probably the reason that it has acquired the name of the bilious temperament.

SIXTH, They are not so fond of muscular action—they are not so lively and changeable in their thoughts and feelings as arterial temperaments.

When we wish to learn the temperament of any person, first observe his osseous system, if that is fairly developed—if he is not too tall for his breadth—if his chest is capacious enough to allow of a pair of lungs of the common size—if there is nothing essentially disproportioned in his frame, you will pass to the muscular system, and see if the frame is well covered with flesh; if so, then observe the consistence of the flesh, see if it is as firm as ordinary; next turn your atten-

tion to the fineness and color of the hair, and the sharpness or roundness of the features, and the size of the head, in order to ascertain the degree in which the nervous system is developed, compared to the muscular. Next observe the three nourishing systems, and see whether the digestive, the arterial, or the venous, predominates.

We rarely see an instance of any temperament pure; two, and sometimes three systems frequently combine to produce a mixed temperament: and here it is necessary to use much discrimination, as every person whom we examine will present a new combination, or a different degree of the same temperament that we have observed before.

Black eyes and hair, and a yellowish neck, combined with red cheeks, indicates a combination of the venous and arterial, or rather a struggle for predominance.

Sharp features, with a lean body, and a dark complexion, indicate a combination of the nervous and venous.

Sharp features and lightness of flesh, with red cheeks, blue eyes and light hair, indicate a combination of the arterial and nervous.

Heavy round features and form, with a dark complexion, indicate a combination of the digestive and venous. It is not necessary to enumerate and describe all the combinations and their effects, as a discerning mind will soon discover them by the application of the foregoing principles.

Dr. Caldwell, of Kentucky, has written a very interesting essay upon temperament, in which he bases the three principal temperaments upon the three great cavities, the cranium, the thorax, and the abdomen. According to him, if the cranium is most capacious, we have the cerebral or mental temperament. If the thorax is large, the sanguineous system will predominate; and the muscular system being well nourished with blood, will be powerful, of course. If the abdomen predominates, and the chest and head are small,

then the lymphatic temperament will be the consequence ; and all other temperaments are combinations of these three.

Dr. Caldwell's treatise is more philosophical than any preceding one on this subject ; but it is, notwithstanding, very imperfect, as he passes over in silence the bilious temperament, and gives but an unsatisfactory account of the muscular ; he is not sufficiently analytical. The fact is, the size of the head is one evidence of the degree of the nervous temperament—and the size of the chest is an evidence of the perfection and predominance of the arterial and venous systems. But it affords no clue to the relative size of the venous and arterial ; nor does it by any means follow that the muscles are large when the chest is capacious. It is true that the muscles are nourished by the blood, but so also are the nerves and the brain, yet no one pretends that the size of the brain depends upon the size of the thorax.

The developement of the abdomen is also some indication of the activity of the digestive system, and it is useful to attend to the relative size of the three great cavities ; but we can generally perceive in the countenance, indications of the different temperaments, even when there is no apparent disproportion between the cranium, thorax, and abdomen.

Disease frequently produces effects which are mistaken for natural temperaments, but observation and comparison will soon correct us on this point ; and besides, it is not the province of the phrenologist to explain the effects of disease.

Some phrenologists have suggested that there may be a *fine quality* of brain, independent of temperament, and that this fine quality is indicated by the fineness of the external hair, skin and features ; the same general causes operating on the whole constitution alike. If the exterior is of an excellent quality, so also is the interior, and therefore we may expect more firm, active, and energetic manifestations from

a brain which is surrounded by flesh, features, and hair of a fine vigorous appearance, than when the whole outward man is of a coarse texture.

There is some plausibility in this doctrine, but it seems to me very easy to explain the fineness or coarseness of structure by reference to peculiar combinations of temperament, caused by climate, occupation, &c.

CHAPTER III.

GENERAL PRINCIPLES OF PHRENOLOGY.

FIRST, the brain is the organ of mind. This is a proposition which no person of common intelligence at the present day pretends to deny. The ancients entertained different opinions on this subject. Some believed, or rather suspected, that the brain was the seat of the mind; others, with Plato, considered the heart as the seat of the passions, and the brain the habitation of the higher and nobler sentiments. Hipocrates regarded the human brain as a sponge which imbibed the moisture of the body. Aristotle, on the contrary, viewed it as a humid mass intended to temper the heat of the body. Descartes believed that the pineal gland, a part about the size of a pea, at the centre of the brain, was the habitation of the mind. Some, again, pre-

tend to think that the brain was merely to balance the face, and prevent it from inclining too much forward ; and that the mind resided in every part of the body.

Although this is a fundamental principle of phrenology, yet it was fully established in the minds of scientific men before the time of Dr. Gall. To this great man is due the credit of having first discovered and demonstrated the

Second principle, that the brain is constituted of a number of organs. Admitting the first principle of phrenology, it seems impossible to avoid the second. For if the brain is the organ of the human mind, the same is true of other animals. How, then, shall we account for the superiority of man, unless we admit that he has more and higher organs ?

Again, in examining the brains of animals, we find them more complicated, and containing additional parts, as the animal manifests more faculties.

Different faculties are manifested at different ages.

Some persons are great geniuses in some things, and almost idiots in others.

Some are insane on one class of subjects and perfectly reasonable on all others.

In dreaming, some faculties are active and the rest asleep.

It is easy to account for these phenomena, on the principle that the brain is constituted of a number of organs, which are possessed in different degrees by different persons and at different ages, and that the lower animals possess some of them and are destitute of others. One organ may be diseased and the rest sound. One may be asleep or at rest, and others awake and active. But if we deny this phrenological principle, we have no means of explaining these phenomena. Besides the evidence thus derived from the necessity of admitting a plurality of organs, phrenologists have an abundance of proof resulting from observation.

A third principle of phrenology is, that the power of an

organ, (all other things being equal) is in exact proportion to its size. Upon this principle, practical phrenology depends. It is a demonstrable truth, in regard to all the material world, that two or more substances of the same quality and form, will possess a degree of strength and power proportionate to their size; and it is surprising that any individual of common intelligence, should be found in the present age to controvert so obvious a proposition.

A fourth principle is, that the size and activity of the organs may be affected by temperament, disease, exercise and education.

CHAPTER IV.

ANATOMY OF THE BRAIN.

THIS has always been a subject of much learned discussion; but until the time of Dr. Gall, the little that was known concerning it, was of no material use, and only tended to distract the minds of those medical students who endeavored to understand it. The different parts of the brain, instead of receiving names expressive of the functions which they performed, have been named according to the shape which they generally assume. This accounts for the strange

and unphilosophical terms which are used by writers on anatomy, and which are calculated only to discourage the common student. Indeed, few medical students think it worth their trouble to learn the details of the anatomy of the brain as it is commonly taught, since they soon ascertain that it is of no use ; consisting merely in learning the locality of parts, the offices of which are unknown and even un-conjectured, and observing their resemblance in form to certain familiar objects from which they derive their names, such as olive-shaped, harrow-shaped, funnel-shaped, &c.

The discovery of phrenology threw much light on the anatomy and physiology of the brain, and enabled scientific men to give names to many parts expressive of their functions.

HEMISPHERES OF THE BRAIN.

The brain and spinal cord is in two equal and symmetrical halves called hemispheres, one of which is contained within the right side of the skull and vertebra, and the other within the left. Every essential part that is found upon one hemisphere is found in a corresponding place upon the opposite:—thus, upon one hemisphere phrenologists have discovered thirty-six organs of mind, and a corresponding number of similar organs upon the other side: thus also, upwards of forty nerves proceed from one hemisphere of the brain and spinal cord to different parts of the body, and an equal number proceed from the other hemisphere in a similar manner. This explains why nervous diseases sometimes affect one side of the face or body and not the other.

The division of the great organ of mind into hemispheres corresponds with the fact that all the organs of the body that obey the mind are double, so also are the organs of sense that carry information to the mind. Thus we have two

hands and two feet, two eyes, &c. The body, and particularly the face, may therefore be said to be divided into right and left hemispheres, and this is a good illustration of the manner in which the brain is divided.

The line which divides the right from the left hemisphere is called the mesial, or *median line*.

COMMISSURES OF THE BRAIN.

These are parts that extend across from one hemisphere of the brain to the other, and are evidently intended to produce a unity of action between them; so that although the great organ of mind is double, the operations of mind are single; and notwithstanding the organs of sense are double, the sensations are single; onè side of the head cannot be angry while the other is pleased; one side cannot delight in music while the other is averse to it; but both hemispheres act together as if they were one, which could not possibly be the case if they were not intimately united by means of the commissures.

The largest commissure is called the *corpus callosum*; this may easily be seen by separating with the fingers the two hemispheres of the uncovered brain; a white mass several inches wide and about half an inch in thickness will then be seen extending across from one hemisphere to the other, like a bridge.

The *annular protuberance* is about one sixth the size of the corpus callosum, and extends from one hemisphere of the cerebellum, or organ of amativencess, to the other, passing across the medulla oblongata, in such a manner as to be sometimes called the bridge of Varolius, or pons varoli.

We can only conjecture the use of these two commissures from their situation; the fact, however, that they are not

found in some classes of animals, seems to indicate that they are not so important as their size would lead us to suppose.

Dr. Spurzheim also mentions two cases where the corpus callosum was rent entirely assunder, and yet the individuals continued to manifest their minds as usual.

But there are still three others to be seen at the base of the brain by which Dr. Spurzheim considered the *true* commissures. They are

The ANTERIOR,

The MIDDLE, and

The POSTERIOR,

each of which is about equal in size to a goose quill, and they cross, (as their names indicate,) one in the front, another in the middle, and the third in the back part of the brain.

Besides these commissures there is in the front part of the medulla oblongata, a *decussation*; that is, the fibres cross from one side to the other in such a manner as to resemble plaited straw—the hemispheres being entirely separated from each other by a membrano, except where the commissures cross.

There are several parts seen in the median line which do not seem to belong to either hemisphere, and the uses of which are unknown. One of these is called the *pineal gland*, and is about the size of a pea; this is celebrated as the part where Descartes fancied the soul to reside, and is situated just above the posterior commissure, and seems to be attached to it.

Just above the same place are four other small round bodies, known by the name of the *quadrigeminal bodies*.

There may be seen also in the median line at the base of the brain, near where the optic nerves unite, two little round bodies, which on account of their supposed resemblance to breasts, are called *mamillary bodies*; and near

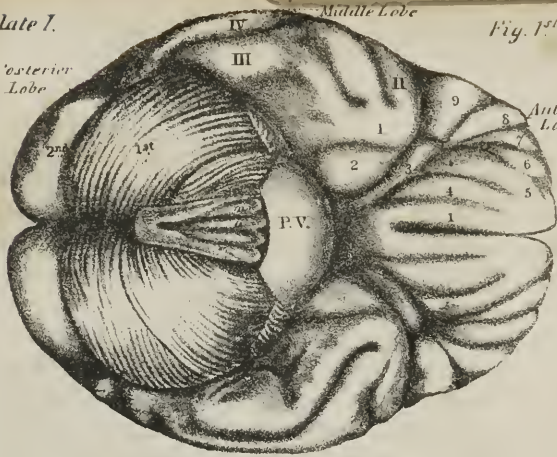
Plate I.

Middle Lobe

Fig. 1st

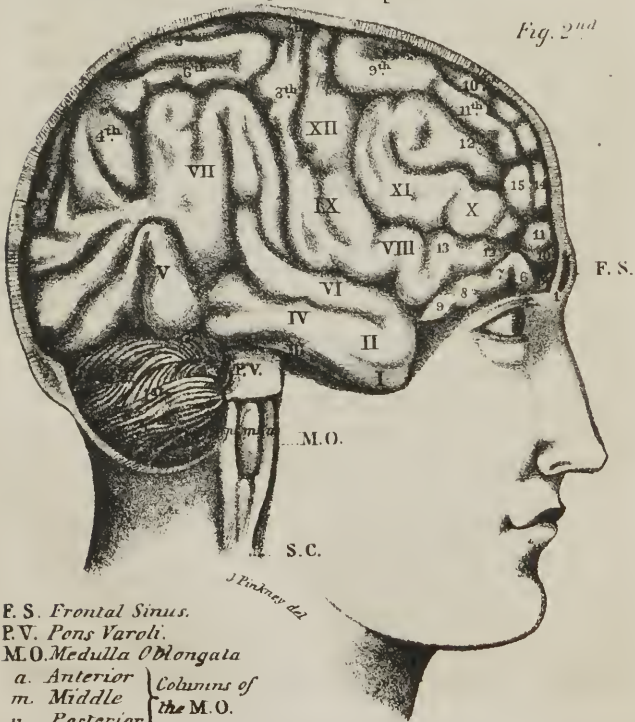
Posterior Lobe

Anterior Lobe



Side view of the right Hemisphere.

Fig. 2nd



- E. S. Frontal Sinus.
- P. V. Pons Varoli.
- M. O. Medulla Oblongata
- a. Anterior
 m. Middle
 p. Posterior
- S. C. Spinal Cord

them is another part called the *infundibulum* or funnel: the very names which these parts have received betray the total ignorance of anatomists concerning the offices which they perform.

SUBDIVISIONS OF THE HEMISPHERES.

The common subdivisions are into

The CEREBRUM,

The CEREBELLUM,

The MEDULLA OBLONGATA, and

The SPINAL CORD.

The spinal cord is contained within the vertebra, or back bone, and extends from the lower part of the back up to the skull. We are indebted to the genius of Mr. Charles Bell for the important discovery, that the spinal cord is not a single nerve, but is composed of three independent nervous columns :

The ANTERIOR,

The MIDDLE, and

The POSTERIOR.

The anterior column, Mr. Bell considered as the medium through which the brain acted upon the muscles to produce voluntary motion.

The middle column he denominates the *respiratory*, because it supplies all the organs of respiration with nerves ; but some late observations of Teideman, Brachet, and A. Combe, render it certain that not only the lungs, but the stomach and all the organs of nutrition are influenced by the nerves which arise from this middle column.

There are ten pairs of nerves, which, according to Bell's arrangement, arise from the middle column ; but he includes also the middle column of the medulla oblongata, which is at the upper part of the spinal cord. Of these ten nerves,

three go to the eye and its surrounding parts, to bring it into harmony with the lungs in the act of speaking, laughing, crying, &c.: another goes to the muscles of the face and gives them expression in harmony with respiration; another to the tongue to move it in speaking: another to the pharynx, producing and modifying the voice; while the four largest nerves which proceed from the middle column are distributed to the lungs, stomach, larynx, diaphragm, heart, and to all the muscles concerned in promoting the systematic and harmonious action of the parts dependent on respiration.

The posterior column is composed of fibres that convey *sensations* to the brain. Thirty-one pairs of nerves are sent off from the spinal cord to different parts of the body, each of which has two roots, one in the anterior, or column of voluntary motion, and the other in the posterior, or column of sensation. As soon as these two roots leave the spinal cord they unite into one nerve and proceed on their way to the different parts of the body to which they are destined. These thirty-one pairs of nerves are remarkably regular in their origin, their succession, and their distribution; but none of their fibres proceed from the middle column.

The spinal cord during the whole of its length is about the size of a man's thumb, but when it enters the skull, through the occipital hole, it gradually becomes larger until it reaches the brain; this part, therefore, between the occipital hole and the brain is called the

MEDULLA OBLONGATA,

on account of its oblong form. This oblongata is considered as the grand centre of communication between all parts of the nervous system. It is the top or capital of the spinal

cord and joins it to the brain. It is the point where all the phrenological organs concentrate their united fibres.

If the brain may be compared to a rose, and the phrenological organs to its leaves, then the medulla oblongata will represent the top of the stem, where all the leaves originate and the spinal cord the rest of the stem.

The medulla oblongata has three prominences ; one in the *anterior* part, corresponding with the anterior column of the spinal cord ; these are named the *pyramids*, on account of their form ; (the plural number is used to include both hemispheres, as there is in reality but one in each hemisphere.) These pyramids, Dr. Spurzheim considered as the origin of the organs of intellect, in the anterior lobe of the brain ; and he traced the fibres by dissection, from the anterior column, or pyramids of the oblongata, to the anterior lobe of the brain. In the *middle column* of the oblongata are two eminences, (one in each hemisphere) which, on account of their fancied resemblance in shape to olives, have received the name of *olivary* bodies. I consider them as the origin of the fibres that constitute the middle lobe of the brain, and by dissection they may be traced into it.

In the *posterior column* of the oblongata are the two *restiform* bodies, (one in each hemisphere) so named on account of their resemblance to cords ; these give origin to the cerebellum, and posterior lobe of the brain.

THE CEREBELLUM,

or little brain, occupies in the adult, about one seventh of the skull, and is situated in the lower back part, in such a manner as, when large, to give fullness to the upper part of the neck. It is entirely separated from the rest of the brain by a thin membrane called the *tentorium*, but is joined to the medulla oblongata by the fibres of the restiform bodies. The

cerebellum, is by phrenologists considered the organ of Amativeness, and notwithstanding its size would seem to proclaim its importance, no other use for it has been discovered, although it has been the subject of many experiments and conjectures.

THE CEREBRUM,

or brain proper, is by far the most important of the subdivisions, as it contains all the phrenological organs that have been discovered, except one. The cerebrum is with great propriety considered as consisting of three lobes in each hemisphere,

The ANTERIOR, occupying the forehead,

The MIDDLE, occupying the sides, and

The POSTERIOR, in the back part of the skull.

This is in remarkable agreement with the three columns of the spinal cord, the three eminences or columns of the medulla oblongata, and the three *true* commissures, which have been described.

Is it not strange that phrenologists have hitherto overlooked this evident division of the organs of mind into three classes ?

VENTRICLES OF THE BRAIN.

Anatomists commonly reckon four cavities in the interior of the brain ; one in each hemisphere, called the great lateral ventricles, and two in the median line, between the hemispheres, the foremost of which is the third, and the space between the cerebellum and cerebrum is the fourth. The third and fourth are too unimportant to deserve a particular description, as they are evidently mere accidental spaces and are probably not intended to subserve any very impor-

tant purpose: It is really surprising that they were ever dignified so much as to be classed with the great lateral ventricles. There is, therefore, in reality but *one* ventricle in each hemisphere; and even this is not strictly a *cavity*, as its upper and under surfaces are in contact. There is a thin membrane which lines the surfaces and prevents them from adhering to each other, and which at the same time supports a complicated tissue of blood-vessels that nourish the interior of the brain.

The mouth of each ventricle is towards the median line, so that when, in consequence of disease, water collects in one cavity, it flows out into the other of the opposite hemisphere; until in some extreme cases, the whole brain becomes distended like a bladder—the convolutions upon the surface are unfolded—the skull bones separate, and all the coverings of the head give way and grow larger to make room for the increasing contents, until the head assumes nearly twice the usual size.

The under surface, or floor of the ventricle, assumes a form, irregular and winding, in some measure corresponding to the three lobes. This appearance has been denominated *tri-cornes*, or three horns, on account of the ventricle extending its windings in three directions, *anterior*, *middle* and *posterior*.

In the fore part of the bottom of the ventricle is the *corpora striata*, or striped body—an eminence resembling half a pear with its largest end in the front lobe and its opposite end pointing outward and backward.

The *optic thalami* is another eminence larger than the striata and situated just behind it. It receives its name from the erroneous supposition that it is the origin of the optic nerve. Spurzheim considered the striata and thalami as composed of fibres on their way and expanding to form at last the convolutions at the surface of the brain. The

situation of these parts, concealed from observation, renders their uses doubtful; the same is true of the *fornix*, a thin layer of medullary substance, that covers the thalami. There are also several other appearances, or parts in the ventricles which have received ridiculous and fanciful names, but nothing is known of their uses; such are the hippo-campus major and hippo-campus minor, &c.

SUBSTANCES OF THE BRAIN.

An examination of the surface of the brain shows it to be composed of a *cineritious*, or ashes colored substance, of a pulpy consistence, which seems to be almost entirely composed of a tissue of exceedingly minute bloodvessels. If a cut is made so as to expose the internal substance of the brain it will appear of a cream color, or nearly white, and instead of being pulpy, like the cineritious substance, it is fibrous, and resembles in firmness and structure the nerves of the body. The cineritious substance is found in small quantities in the interior, but it is principally upon the outside, and surrounds the brain, as the bark surrounds a tree, and it has therefore been named the *cortical* or barklike substance.

The internal white fibrous substance is called the *medullary* substance.

It was the opinion of Spurzheim that the cortical substance was the nourisher of the medullary, but nothing is known with certainty on this subject.

CONVOLUTIONS OF THE BRAIN.

These are the folds, bounded by deep furrows, upon the external surface of the brain. It has been suggested that their use is to increase the surface of the brain without

adding to its bulk ; and this seems a plausible conjecture. In the extreme cases of disease, to which I have alluded in speaking of the ventricles, the convolutions are spread out into a single sheet, just as the convolutions, or folds of an umbrella are spread out into a single sheet when it is opened; and this explains why persons whose heads are thus enlarged frequently manifest their mental powers with ordinary vigour; as the brain is merely unfolded, without its fibrous structure being destroyed.

Every convolution is not an independent and distinct phrenological organ, but in some instances several convolutions combine to constitute one organ, and in others a single convolution embraces an organ.

It is not therefore true, as some suppose, that each organ of mind may be separated from the rest of the brain by anatomical dissection. Anatomy shows the perfect agreement between the structure of the brain, so far as it is understood, and the organs of mind as they appear upon the surface of the skull. A skilful phrenological anatomist can readily point out the particular convolutions that go to constitute each organ; but no anatomist can trace the organs beneath the surface of the brain and show the boundary between them there. In the internal parts of the brain, the fibres of all the organs are blended and confounded together, so as to render it perfectly impossible to distinguish one organ from another. Anatomy affords no direct proof of the truth of phrenology. We study the structure of the brain to find an *explanation* of well established phrenological facts, and not to find *evidence* of their truth.

Phrenology was first discovered, not by an examination or dissection of the brain, but by observing the agreement between the disposition of men and animals and the forms of their heads. The brain was afterwards examined, and its structure analyzed with great care, in the hope that it would

shed some new light upon the subject; but anatomy has hitherto been of little use to phrenology; on the contrary, we are indebted to phrenology for nearly all our useful knowledge concerning the anatomy of the brain.

So far as the anatomy of the brain is understood, it is in beautiful harmony with phrenology, but it is a great mistake to suppose that phrenology is dependent upon anatomy for evidence by which to establish its truth. Those opponents, therefore, who object to phrenology because it cannot be proved by dissection, evince an unpardonable ignorance of the subject. Most people cannot understand why so many physicians, who are supposed to know the nature of the brain disbelieve in phrenology; but the truth is, physicians are little wiser concerning the brain than other men; and even if they were ever so well acquainted with *anatomy*, they could not on that account, be able to judge concerning the truth of phrenology better than those who are entirely ignorant upon that subject. Any man who is capable of perceiving the forms and sizes which the head assumes in different individuals, and comparing their developements with their conduct, can judge concerning the truth of phrenology as well as the most eminent medical professor.

ARTERIES OF THE BRAIN.

All anatomists agree, that the amount of blood which the brain receives, is at least four times greater than that of any other part of the constitution of equal bulk. This astonishing fact, proclaims the great importance of the arterial system and organs of respiration to the operations of mind. The blood enters the brain by four different passages; two in front, called the right and left carotid arteries, and two in the back of the head, called the right and left vertebral arteries. It is curious to observe the contrivance which

prevents the blood from entering the delicate mass of the brain too suddenly and forcibly. Before the arteries are permitted to enter the skull, they are made to traverse several winding and almost retrograde passages, and encounter several obstructions, that serve to check the force of the current; the blood then enters the skull through four different arteries, that all unite at the base of the brain to form one great depot; which, although not exactly in the form of a circle, is denominated the *circle of Willis*; and it is from this circle that the blood finally takes its departure to enter the substance of the brain. Besides the arteries of the cerebellum, there are three principal arteries which go from the circle to the cerebrum; they are

The ANTERIOR,

The MIDDLE, and

The POSTERIOR,

so named from the three lobes of the brain which they supply; each of these arteries subdivide into an upper and under branch before they lose themselves in the brain.

VEINS, OR SINUSES OF THE BRAIN.

Although the blood enters the brain by four different channels, it is all returned through one great vein—the *longitudinal sinus*—which is situated in the median line between the hemispheres. It commences near the organ of Individuality, and follows the skull over to the lower part of Parentiveness; it then divides into two branches, one passing to the right, leaves the skull near Combativeness; the other passing to the left, leaves the skull in a similar manner. The course of this great sinus may be traced on the inner surface of the skull by the deep impression it makes in the bone, particularly at the back part, where it

is much larger than in front, in consequence of the numerous veins which empty into it as it proceeds.

COVERINGS OF THE BRAIN.

The brain has five separate coverings;

1st. The *pia mater*, or soft mother, so called from a belief that all the membranes of the body sprung from it. This is a thin, delicate, transparent membrane, that exactly fits the surface of the brain, sinking down into every furrow and convolution, and passing into every cavity; it acts as a kind of supporter to the numerous branches of bloodvessels that traverse the external and internal surfaces of the brain in every direction.

2d. The *tunica arachnoida*, so called on account of its resemblance to a spider's web; this embraces the brain like network, but does not sink down into the depressions as the *pia mater* does; it is so delicate and fine that it was unobserved by ancient anatomists.

3d. The *dura mater*, or hard mother, a thick and strong membrane, passes over the *tunica arachnoida* and sinks down between the hemispheres in the median line; it serves to separate them from each other. This part or process of the *dura mater* is called the *falx*, on account of its resemblance to a scythe: another part passes between the cerebellum and cerebrum, and separates them from each other; this is called the *tentorium*.

4th. The *skull or cranium* is composed of six bones,

The Frontal, of the forehead,

The two Temporal, of the temples,

The two Parietal, of the sides and top of the head, and

The Occipital, at the back of the head.

Besides these, are the Sphenoid, and Ethmoid bones at the base of the brain. The places where the edges of the bones are joined, are called *sutures*.

The principal sutures are,

The *coronal*, passing over the cranium and joining the frontal to the parietal bones.

The *squamous*, or scaly sutures, that join the temporal to the parietal.

The *lambdoidal*, joins the occipital to the parietal bones; this is so named because it resembles in form one of the Greek letters.

The *sagittal*, that joins the two parietal together in the median line, so named from its resemblance to an arrow.

There are many unimportant sutures in the base of the cranium that do not concern practical phrenology. The manner in which the sutures appear is called *serated*, or sawlike, on account of the manner in which the bones join each other. It is necessary to know the places of the sutures, as they frequently produce ridges that are mistaken for developements of brain; they may, however, be easily distinguished by their angular abrupt appearances. There are also several processes, or prominences of the skull, that are frequently mistaken by novices, for phrenological organs; one of these is the *mastoid* process, just behind the ear; this is sometimes mistaken for Combativeness, but is just below the main part of that organ, and is much more sharp and angular: another is the *occipital spine*, situated near Philo-progenitiveness, and is sometimes protruded more than an inch; Dr. Good very shrewdly suggested, that this bony process is intended to protect the brain in case of falling and striking the back of the head on the ice. There is another small prominence near Imperativeness, which in some cases modifies the appearance of that organ, and sometimes there is a slight depression just below this part, caused by the manner in which the bones united in infancy, making the organ appear small when it is full, but the depression is between Inhabitiveness and Imperativeness.

If we break the skull and look at the broken edge, we shall see that it is not composed of solid bone all the way through, but there is a layer about as thick as a half dollar which constitutes the *outer table*, or that part of the skull next to the hair; there is another *inner table* next to the brain; and between the two tables is a spongy, coarse strata, called the *diploe*. In the average of white adults, the skull, including the two tables and the diploe, is near a quarter of an inch thick.

The negroes have the thickest skulls I have ever seen: and I have observed that the thickness of the skull is in proportion to the coarseness of the constitution generally, and the developement of the osseous system in particular.

The *frontal sinus* is a part of the skull, just over the organs of Individuality and Locality, where the inner and outer tables generally become more distant from each other, as age advances; allowing the diploe to occupy a larger space. This cavity renders it sometimes difficult to judge correctly concerning these organs, but its presence and size can be estimated by the peculiar swelling appearance which it assumes, being more sudden and abrupt than phrenological developements; besides, it does not exist in children, and even in adults it seldom becomes a serious obstacle to a skilful practitioner.

5th. The *scalp* is a very thin muscular integument, that covers the skull; this offers no obstacle to phrenological observation, except at the temple, in the region of Constructiveness and Acquisitiveness; here the mastoid muscle is situated, which sometimes renders this part prominent, like a developement of brain; but the thickness of the muscle is easily ascertained by pressing it firmly with the fingers, and causing the individual to move his jaw at the same time.

CHAPTER V.

CLASSIFICATION OF THE ORGANS.

THE accidental and promiscuous manner in which Dr. Gall made his first discoveries, was extremely unfavorable to any systematic arrangement or philosophical explanation of the organs. Dr. Spurzheim has deservedly received much credit for improving the science in this respect, and correcting the very natural errors of his illustrious friend.

The following is Spurzheim's last and most improved arrangement and nomenclature.

ORDER 1—FEELINGS OR AFFECTIVE FACULTIES.

Genus I.—PROPENSITIES.

- | | |
|--------------------------|----------------------|
| † Desire to live. | 5. Inhabitiveness. |
| * Alimentiveness. | 6. Combativeness. |
| 1. Destructiveness. | 7. Secretiveness. |
| 2. Amativeness. | 8. Acquisitiveness. |
| 3. Philoprogenitiveness. | 9. Constructiveness. |
| 4. Adhesiveness. | |

Genus II.—SENTIMENTS.

- | | |
|--------------------|------------------------|
| 10. Cautiousness. | 16. Conscientiousness. |
| 11. Approbateness. | 17. Hope. |
| 12. Self-Esteem. | 18. Marvellousness. |
| 13. Benevolence. | 19. Ideality. |
| 14. Reverence. | 20. Mirthfulness. |
| 15. Firmness. | 21. Imitation. |

ORDER II.—INTELLECTUAL FACULTIES.

Genus I.—EXTERNAL SENSES.

Voluntary motion.	Smell.
Feeling.	Hearing.
Taste.	Sight.

Genus II.—PERCEPTIVE FACULTIES.

22. Individuality.	28. Order.
23. Configuration.	29. Calculation.
24. Size.	30. Eventuality.
25. Weight and resistance.	31. Time.
26. Coloring.	32. Tune.
27. Locality.	33. Artificial language.

Genus III.—REFLECTIVE FACULTIES.

34. Comparison.	35. Casuality.
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The following is the Classification adopted by Mr. George Combe, in his "System of Phrenology." There is no essential difference between him and Spurzheim except on the organ of Inhabitiveness.

ORDER I.—FEELINGS.

Genus I.—PROPENSITIES.

1. Amativeness.	Alimentiveness.
2. Philoprogenitiveness.	Love of Life.
3. Concentrativeness.	7. Secretiveness.
4. Adhesiveness.	8. Acquisitiveness.
5. Combaticiveness.	9. Constructiveness.
6. Destructiveness.	

Genus II.—SENTIMENTS COMMON TO MAN WITH THE LOWER ANIMALS.

10. Self-Esteem.	12. Cautiousness.
11. Love of Approbation.	

Genus III.—SUPERIOR SENTIMENTS.

- | | |
|------------------------|--------------------------|
| 13. Benevolence. | 18. Wonder. |
| 14. Veneration. | 19. Ideality. |
| 15. Firmness. | 20. Wit or Mirthfulness. |
| 16. Conscientiousness. | 21. Imitation. |
| 17. Hope. | |

ORDER II.—INTELLECTUAL FACULTIES.

Genus I.—EXTERNAL SENSES.

- | | |
|-------------------|----------|
| Feeling or Touch. | Smell. |
| Taste. | Hearing. |

Genus II.—INTELLECTUAL FACULTIES WHICH PERCEIVE
EXISTENCE AND PHYSICAL QUALITIES.

- | | |
|--------------------|---------------|
| 22. Individuality. | 25. Weight. |
| 23. Form. | 26. Coloring. |
| 24. Size. | |

Genus III.—INTELLECTUAL FACULTIES WHICH PERCEIVE
RELATIONS OF EXTERNAL OBJECTS.

- | | |
|------------------|---------------|
| 27. Locality. | 31. Time. |
| 28. Number. | 32. Tune. |
| 29. Order. | 33. Language. |
| 30. Eventuality. | |

Genus IV.—REFLECTING FACULTIES.

- | | |
|-----------------|----------------|
| 34. Comparison. | 35. Causality. |
|-----------------|----------------|

The importance of aiming at a correct arrangement of the organs will be better understood after reading the following quotation from “Combe’s System of Phrenology,” pages 105 and 6:

“Dr. Spurzheim divides the faculties into two orders, FEELING and INTELLECT, or into *affective* and *intellectual* faculties. The feelings are subdivided into two genera, PROPENSITIES and SENTIMENTS. He applies the name *propensities* to indicate internal impulses, which invite only to

certain actions ; and *sentiments* designate other feelings, not limited to inclination alone, but which have an emotion of a peculiar kind superadded. Acquisitiveness, for example, is a mere impulse to acquire; Veneration gives a tendency to worship, accompanied with a particular emotion, which latter quality is the reason of its being denominated a Sentiment.

“The second order of faculties makes us acquainted with objects which exist, their qualities and relations; and they are called *intellectual*. They are subdivided by Dr. Spurzheim into four genera. The first includes the external senses and voluntary motion; the second, those internal powers which perceive existence; or make man and animals acquainted with external objects, and their physical qualities; and the third, the powers which perceive the relations of external objects. These three genera are named *perceptive faculties*. The fourth genus comprises the faculties which act on all the other powers, which compare, judge, and discriminate; and these are named *reflective* faculties.

“The names of the faculties employed in this work are, with few exceptions, those suggested by Dr. Spurzheim. To designate *propensity*, the termination *ive* is added to a root or fundamental word, and indicates *the quality of producing*; and *ness*, the abstract state, as Destructiveness. The termination *ous*, characterises a *sentiment*, as Cautious, Conscientious. To these is added *ness*, to express the abstract state, as Cautiousness, Conscientiousness. The names of the *intellectual* faculties are easily understood, and do not require any particular explanation.

“Considerable difficulty attends the arrangement of the faculties and organs. In the first and second editions of this work, they were arranged and numbered according to the order adopted in Dr. Spurzheim’s New Physiognomical System, published in 1815. The principle of that arrange-

ment was, as far as possible, philosophical. The organs common to man and the lower animals came first, beginning with the lowest, and ascending. The organs of the moral sentiments were next treated of; and, lastly, the organs of intellect. Since 1815, the great divisions of this classification have been retained, but repeated alterations have been made by Dr. Spurzheim in the arrangement of the details. It appears impossible to arrive at a correct classification until all the organs, and also the primitive faculty or ultimate function of each, shall be definitely ascertained, which is not at present the case. Till this end shall be accomplished, every interim arrangement will be in danger of being overturned by subsequent discoveries. In the mean time, however, for the sake of uniformity, I adopt Dr. Spurzheim's last order of arrangement. During his visit to Edinburgh in 1828, he demonstrated the anatomy of the brain, and traced out the connexion between the organs in a manner so clear and satisfactory, that the basis of his arrangement appeared founded in nature. Dr. Gall seems not to have adopted any philosophical principle of classification; but it is proper that his names and order should be known. I shall, therefore add to the present work a table of his order.

“In the case of many of the organs, observations have been made to such an extent, that the functions are held to be *ascertained*; and in regard to others, where the observations have been fewer, the functions are stated as *probable*. There is no difference of opinion among phrenologists in regard to the kind of manifestations which accompany the organs set down as established; their differences touch only the result of the metaphysical analysis of the feelings and intellectual powers, and the order of their arrangement.”

After reading the preceding quotation from Mr. Combe, the advantages of the new arrangement which I propose will be appreciated.

NEW CLASSIFICATION.

I find the cerebral organs of all animals evidently divided into three classes; each of which, commencing at the base of the brain with a single organ, expands and proceeds upwards, receiving new additions as the animal rises in the scale of beings.

Class 1.—IPSEAL,* or Self-Relative *propensities*.

Class 2.—SOCIAL, or Society-Relative *propensities*.

Class 3.—INTELLECTUAL, or Knowledge-Relative *faculties*.

Each of these classes may be subdivided into *ranges*, or *groups*, to correspond with the progressive stages of animal character, from the lowest species of the zoophytes that seem to claim kindred with the vegetable, up to man, who is “but little lower than the angels.”

Class 1.—IPSEALS.		Class 2.—SOCIALS.		Class 3.—INTELLECTUALS.	
Ranges.		Groups.		Ranges.	
1st.	{ 1 Alimentiveness.	Establish- ing.	{ 1 Amativeness.	Lower.	{ 1 Individuality.
	{ 2 Destructiveness.		{ 2 Parentiveness.		{ 2 Chemicality.
	{ 3 Combativeness.		{ 3 Inhabitiveness.		{ 3 Language.
2d.	{ 4 Secretiveness.		{ 4 Adhesiveness.		{ 4 Form.
	{ 5 Cautiousness.	Governing	{ 5 Imperativeness.	Middle.	{ 5 Size.
3d.	{ 6 Constructiveness.		{ 6 Approbateness.		{ 6 Weight.
	{ 7 Acquisitiveness.		{ 7 Firmness.		{ 7 Colour.
			{ 8 Conscientiousness.		{ 8 Order.
4th.	{ 8 Playfulness.	Conform'g	{ 9 Submissiveness.	Upper.	{ 9 Number.
	{ 9 Perfectiveness.		{ 10 Kindness.		{ 10 Direction.
	{ 10 Hopefulness.		{ 11 Imitativeness.		{ 11 Eventuality.
			{ 12 Credenciveness.		{ 12 Time.
					{ 13 Tune.
					{ 14 Comparison.
					{ 15 Causality.

*From the Latin *Iipse*—self.

This division into three classes, IPSEAL, SOCIAL, and INTELLECTUAL, is founded upon the following considerations:

FIRST, ANATOMY points continually to three grand divisions—

1. The spinal cord is in three columns, anterior, middle and posterior; and Mr. Charles Bell has demonstrated that all the nerves which proceed from one column, are destined to perform one class of functions. The nerves from the anterior column are for volition; those from the middle, for respiration and nutrition; and those from the posterior, for sensation.

2. The medulla oblongata, Mr. Bell considers as a continuation of the same three columns of the spinal cord; but as he was little acquainted with the science of phrenology, this great anatomist was unable to trace the three columns up into the brain. The medulla oblongata has three bodies,

The pyramidal, in the anterior,

The olivary, in the middle, and

The restiform, in the posterior column.

3. The brain proper has always been divided into three lobes; anterior, middle, and posterior; and this division may be found strongly marked in the brains of all the higher animals. Spurzheim found by dissection, that the fibres of the anterior pyramidal bodies of the oblongata, expanded into and constituted the anterior lobes of the brain; and he contended that the middle and posterior lobes originated in the other two parts of the oblongata.

4. All anatomists agree that the cerebellum, or organ of Amativeness, has its primary fibres in the posterior column of the oblongata; and when we consider that this is the foundation of the social class, we shall be at once struck with the harmony which it exhibits with the other facts upon

which my classification is based. Mr. Bell asserts that the cerebellum contains the elements of the whole posterior column of the spinal cord; but no phrenologist will agree with him, since we have abundant evidence that the cerebellum is but the single organ of Amativeness, and it is not therefore reasonable that the third part of the spinal cord and all the nerves of sensation are related to this single propensity only.

5. Each hemisphere has a great lateral ventricle, and this ventricle presents an appearance which has been denominated tri-cornes, or three horns, anterior, middle, and posterior.

6. There are three commissures at the base of the brain, which Spurzheim called the true commissures—the anterior, middle and posterior.

There is no other phrenological principle which is supported by so many *anatomical* facts, and I cannot but hope that its discovery will serve to render phrenology more acceptable and useful to medical and scientific men, simplifying as it does the knowledge of the brain and nervous system.

SECOND. The natural history of animals is all in harmony with this classification.

1. The three *powers*, viz. Alimentiveness, Amativeness, and Individuality, which constitute the foundation of the three classes, are manifested by all animals. No animal, however low in the scale of beings, is destitute of these three; even the vegetable kingdom may be said to possess Alimentiveness and Amativeness; every vegetable instinctively disposes its limbs and roots in such a manner as to obtain nourishment, and propagate its species. If we pass to those animals that are but one degree above the vegetable, we shall find them manifesting Individuality in addition. They not only endeavour to obtain nourishment and propagate their species, but they also recognize the existence of those

surrounding objects which are adapted to their propensities.

2. The *organs* of these three powers are found at the very base of the brain:

Amativeness, at the lowest posterior,

Alimentiveness, at the lowest middle, and

Individuality, in the centre of the lowest front part of the brain.

The powers of the mind are divided into two grand orders,

I.—PROPENSITIES,

or blind impulses, which are the causes of all actions.

II.—INTELLECTUAL FACULTIES,

that acquire knowledge and point out the means by which the propensities may be gratified. If we had no propensities we should *do* nothing; and if we had no intellectual faculties we should *know* nothing; in proportion to the *number* of *propensities* the *actions* of animals are *complicated*: in proportion to the *size* of their organs their actions are *powerful*: in proportion to the number of the *intellectual faculties*, the *knowledge* of animals is various, and the thoughts complicated; and in proportion to the *size* of their organs, the *amount* of knowledge will be greater, and the thoughts more correct.

In the Intellectual Class, if we commence at Individuality, we find it manifested by the very lowest animals; and if we then proceed upwards, according to the numbering of the bust, we shall perceive that the organs rise and expand out of each other in a manner strictly agreeing with the progressive intelligence of animals; Causality, the highest of this class, being manifested in a vigorous and efficient man-

ner only by man, the very highest and most complicated of organized beings.

The *propensities* are divided into

Ipsseals, or Self-Relatives, and

Socials, or Society-Relatives.

The Ipsseals produce those actions only, which have for their object the nourishment, protection, improvement and happiness of the individual.

The Socials originate those actions only, which have for their object the production, the establishment, and the government of society, and conformity to its useful regulations.

In the Ipsseal Class, if we commence at Alimentiveness, we see it manifested by all organized beings; if we proceed upward, according to the numbering of the bust, we find the first and second ranges of Ipsseals manifested by the lower classes of animals; the third range is manifested only by the higher and more sagacious animals; and the fourth range is fully manifested only by man, and in his brain only is it found fully developed.

In the Social Class, if we commence at Amativeness, we also find this manifested by all organized nature, both vegetable and animal. If we proceed upward and forward according to the numbers on the bust, until we arrive at Credenciveness, we shall trace the progress of society, from its very lowest stage in vegetable life, up through every grade of animals, to its highest perfection in the most polished circles of human society.

The history of the phrenological organs, therefore, when properly arranged, contains within itself the history of all animated nature.

TECHNICAL TERMS.

Every new and progressive science, necessarily labours under the disadvantages which result from a change of its technical terms; and although all innovations in this respect encounter more or less opposition, yet, if they are real improvements, the public finally gives them a triumphant reception.

Every science also furnishes evidence of the necessity of limiting the terms used, with as much precision and accuracy as possible; there is nothing in works of science that contribute more to confusion than using as synonymous, words and expressions which have very different significations; or using technical terms in a vague and indefinite manner. In polite literature, a latitude of expression and an ambiguity of meaning, may be of trifling consequence, but in works of science, nothing is more seriously injurious.

When explaining the organs, I shall give the reasons for any alterations that are introduced in their names; but it is necessary to define in this place, some of the more *general* terms which are frequently used unphilosophically.

ORGAN, when applied to this subject, means an instrument formed by nature and adapted to perform a useful office. ORGANIZED, signifies that a thing is composed of organs; thus vegetables and animals are said to be organized, and all other things *unorganized*.

FUNCTION, is the proper action, or office of an organ.

ANATOMY, explains the structure of organs.

PHYSIOLOGY, explains the functions of organs.

PATHOLOGY, explains the disease of organs.

POWER, is used synonymously with *function*; thus we say, "the powers of the mind," meaning the functions of the organs of mind. I apply the term *power* to all the organs.

FACULTY, has been generally adopted by phrenologists as synonymous with *power* and *function*; thus we say "the faculties of the mind," "the faculty of an organ," &c. but I prefer using the word *power* in this general manner. In this work I apply the term *faculty* only to the *intellectual* organs. A person may have a *faculty* to do a thing and not have any *propensity* or inclination to do it; or he may have the propensity without the faculty. When we consider that the faculty or ability of performing any operation, depends upon the intellectual organs, and the inclination to perform it upon the blind propensities, we shall see the impropriety of applying the term *faculty* to the propensities. It is undoubtedly true that a propensity may contribute to produce a *faculty* of constructing, or acquiring, or imitating; but it does so only by keeping the *attention* of the *intellectuals* directed to the subject.

PROPENSITY, is a blind impulse to action; I apply this term to the functions of all the organs of mind, except the intellectuals. Spurzheim denominates the propensities "affective faculties," and divides them into

Animal Propensities,
Inferior Sentiments, and
Superior Sentiments.

"He applies," says Mr. Combe, "the name, *propensities* to indicate internal impulses, which invite only to certain actions; and *sentiments*, designate other feelings, not limited to inclination alone, but which have an emotion of a peculiar kind superadded. Acquisitiveness, for example, is a mere impulse to acquire; Veneration gives a tendency to worship, accompanied with a particular emotion, which latter quality is the reason of its being denominated a sentiment."

This distinction between propensities and sentiments, seems to me entirely unfounded; I see no objection to

using the term *sentiment* to designate the higher propensities, and distinguish them from the lower; but I respectfully deny that they are accompanied with any "emotions of a peculiar kind superadded," which will thereby enable us to distinguish them from the lower propensities. Is not Combativeness, or Adhesiveness, accompanied with a peculiar emotion, as well as Imitativeness, or Firmness, or even "Veneration?" Yet, the latter are denominated sentiments, on account of their possessing emotions, while the former are degraded to *animal propensities*, because they are supposed to be destitute of emotions! The truth is, every propensity and sentiment is, when active, accompanied with an emotion peculiar to itself; and in this respect, the higher powers enjoy no advantage over the lower; on the contrary the lower propensities, having the largest organs, are accompanied with the most powerful emotions.

SENTIMENT, may therefore be conveniently used to distinguish the higher propensities from the lower, but there cannot easily be a line drawn between, so that we can with propriety say, all above are sentiments, and all below animal propensities. Every organ, as we mount the scale, is higher than the preceding, but there can be no point where *low* ends, and *high* begins.

EMOTION is the feeling of which we are conscious when any of the propensities are active; thus, *anger*, is an emotion produced by the excited state of the propensity of Destructiveness; *vanity*, is an emotion produced by Approbativeness; *pity*, an emotion produced by Kindness, &c.

FEELING, is synonymous with *emotion*, and not with *propensity*, as it is generally considered. Feeling is the *effect* of propensity. When, therefore, Spurzheim denominated the fundamental propensities, "feelings," he confounded

cause and effect together. A propensity, being active, produces a feeling or emotion.

INSTINCT, is synonymous with propensity, but is generally applied to the minds of animals in opposition to the reasoning powers of man. Thus it is said that animals are guided by instinct, and man by reason; but this is unphilosophical, for animals do reason, although imperfectly; and man is possessed of all the instincts of animals, although he also has higher and nobler powers superadded.

PASSION, is a violent emotion.

AFFECTION, is nearly synonymous with feeling; it is a mode of action of the propensities.

SENSE, in its most proper meaning, is the function of the nerves that convey impressions to the brain.

SENSATION, is the perception of the impressions conveyed to the brain by the senses.

SENSIBLE, signifies that the senses are active.

SENSIBILITY, is a state favorable to sensation.

SENSITIVENESS, is nearly synonymous with sensibility.

PERCEPTION, is the function of the intellectual organs.

CHAPTER VI.

INTELLECTUAL FACULTIES.

ALL knowledge depends upon this class of organs: they may be divided into

External Senses,
Perceptives, and
Reflectives.

Spurzheim subdivided the perceptives into those that perceive existence and physical qualities, as Form, Size, Weight and Color; and those that perceive the relations of things, as Direction, Number, Order, Eventuality, Time, Tune, and Language. I do not object to this as a metaphysical analysis, but I deem it of great importance to follow the arrangement of nature, as far as it can be ascertained; therefore I arrange the organs according to the order in which they are developed in the brain. I commence with Individuality, the foundation organ of the Intellectual Class. It originates at the medulla oblongata, in the centre of the base of the

brain, and runs forward in the median line until it reaches the anterior extremity of the frontal lobe, so as when large, to make the forehead prominent at the top of the nose.

Next is the organ of Chemicality, situated at the root of Individuality; and, whether we consider the office which it performs, or its location, or the history of animals, we must (if we admit its existence) rank it next to Individuality.

The organ of Language is next; this also is at the root of Individuality, although not so far back as Chemicality. I consider Language as one of the lowest animal percepts, and not as some do, the very highest: I shall explain this when speaking of the organ of Language.

Form, also originates at the root of Individuality, and then runs forward parallel with it.

Size, Weight, Color, Order, and Number, branch out in the succession in which they are named. Their roots all seem to point to the root of Individuality, as the branches of a tree point towards the trunk. A glance at the plate representing the base of the brain, will show at once the propriety of this arrangement, and its harmony with nature.—These organs I call the Lower Range.

The other organs of Intellect cannot be seen at the *base* of the brain, but they appear at the anterior extremity of the frontal lobe, so as when long and large to give prominence and expansion to the forehead. Direction, Eventuality, Time and Tune, constitute the Middle Range, and Comparison and Causality, the Upper Range.

The following arrangement will now be understood.

EXTERNAL SENSES.

Touch.
Taste.
Smell.

Hearing.
Sight.

LOWER RANGE OF PERCEPTIVES.

- | | |
|-------------------|------------|
| 1. Individuality. | 5. Size. |
| 2. Chemicality. | 6. Weight. |
| 3. Language. | 7. Color. |
| 4. Form. | 8. Order. |
| | 9. Number. |

MIDDLE RANGE OF PERCEPTIVES.

- | | |
|------------------|-----------|
| 10. Direction. | 12. Time. |
| 11. Eventuality. | 13. Tune. |

UPPER RANGE, OR REFLECTIVES.

- | | |
|-----------------|----------------|
| 14. Comparison. | 15. Causality. |
|-----------------|----------------|

 NERVES OF THE EXTERNAL SENSES.

These are the nerves that convey to the brain impressions from the external world. The common opinion is correct, that all our knowledge concerning the objects by which we are surrounded, is obtained through the medium of the five senses. If an individual were born without any of these organs, he would be a mere vegetable; though all the other parts of his constitution were perfect, they could not act with intelligence. Even when one only of the senses is wanting, or lost, the unfortunate person is deprived of the power of receiving information through that channel, and in the pathetic language of Milton,

“Wisdom through *one* entrance quite shut out.”

But I cannot for a moment countenance the notion that the senses *perceive* or *know*. They only receive from the

external world, and convey to the brain, the materials of knowledge; and it is the office of the *perceptives* to work up the materials into sensations, perceptions, ideas, &c.

Before the organs of perception in the brain were discovered, it was a natural error to ascribe to the eye the power of perceiving colors, distances and forms; to the ear the power of perceiving melody, and to the touch, the power of perceiving weight; but the functions of the external senses being now better understood, they can be deemed only vehicles for impressions. Spurzheim made a distinction between the immediate and mediate functions of the senses. In his chapter on the external senses, he says:—"The spheres of *immediate* activity of the five senses are very limited; feeling perceives only dryness, moisture and temperature; taste, savours; smell, odours; the ears, sound; and the eyes, light. All the other functions are only *mediate*."

Now I deny that the eye perceives light—the ear, sound—the smell, odours—the taste, savours—and the touch, moisture, &c. It is, in my opinion, the office of Individuality to perceive light, sound, savours, odours, &c.; the eye receives the light, the retina is impressed, and the optic nerve conveys the impression to the brain, and there Individuality *perceives* the light, and the organ of Colour perceives the colour, the organ of Form the shape, &c.

TOUCH.—The innumerable branches of the nerves of this sense, proceed from the most minute and remote parts of the body to the brain, conveying impressions of weight, temperature, moisture, &c.

TASTE.—The sense of taste is a branch of the fifth pair that proceeds from the tongue to the medulla oblongata, conveying to the brain impressions of the savour of bodies that come in contact with the tongue, in a state of solution.

SMELL.—The organ of smell is the olfactory nerve, which

proceeds in numerous branches from the nasal organ to the brain, and is lost in its substance at the organ of Chemicality; this sense conveys to the brain impressions of odorous particles which are detached from distant bodies and mingled with the air.

HEARING.—The auditory nerve is a branch of the seventh pair, called the portio mollis, and proceeds from the internal part of the ear to the medulla oblongata, and conveys the impressions of sound.

SIGHT.—The optic nerve has one extremity in the eye, constituting the retina, and may be traced from the eye to the brain near the medulla oblongata; it conveys impressions of light.

LOWER RANGE OF PERCEPTIVES.

1. INDIVIDUALITY.

“They see, but do not perceive.”—*Isaiah*.

This is the faculty that perceives the impressions that are conveyed by the senses to the brain. It is the first organ of the intellect that acts, and the only one that is immediately and directly acted upon by the senses. Until this has been excited, none of the other intellectual organs can perform their functions. This is the great fundamental organ of the knowledge-relative class, and all the rest are super-additions. It takes notice of individual things and existences—it perceives things in their collective and individual state—it takes cognizance of all that immense class of ideas included under the grammatical term *nouns*—and it bears precisely the same relation to the other Intellectuals that the noun does to the other parts of speech in grammar. When

this is large and vigorous, all the others are compelled to act their part in proportion to their size; being mere emanations, like so many streams from one grand fountain, their action is dependent upon, and in perfect harmony with it.

However large the nerves of the external senses may be, the impressions which they convey to the brain will excite comparatively little action in the Intellect, if this important inlet to the mind be contracted in its dimensions. This is the first faculty of this class that is manifested by animals after they come into existence; as soon as they begin to use their senses, they also begin to exercise Individuality. The senses and this faculty are co-existent; every animal, however low in the scale of beings, as soon as it manifests the senses, manifests this also. It is the possession of this which may be said to constitute the distinction between the animal and vegetable kingdoms. Vegetables manifest two propensities, viz. Alimentiveness and Amativeness, but they do not manifest in an undoubted manner, any of the Intellectuals, nor do they possess any of the senses; their Alimентive and Amative propensities seem to be guided merely by chemical attraction. I am aware that some philosophers consider vegetables as but a lower order of animals, but even if this be admitted, it affords no argument against these views. The Polypus (Fig. 1.) bears in its external appearance, a striking resemblance to vegetables—like them it manifests but two propensities.

Fixed like a plant to its peculiar spot,
To draw nutrition—propagate—and rot.

But if any thing comes in contact with its limbs, fitted to gratify Alimentiveness, they immediately contract and draw the object into a hollow, which runs the whole length of its trunk, and which answers the purpose both of stomach and belly; all the indigestible parts being expelled again by the same orifice where they entered. They sometimes

swallow a whole fish, (Fig. 2.) and the body being transparent, the form of the fish appears through it.

Fig. 1



Fig. 2.



This is a specimen of the lowest stage of animal existence; but even here we see the sense of touch, and the faculty of Individuality manifested in the most perfect manner, besides the two vegetable propensities.

If we glance at the representation of the base of the brain, we see the organs of these three principal powers,

Individuality, at the centre of the lowest front,

Alimentiveness, at the lowest part of the middle,

Amativeness, at the lowest back part of the brain.

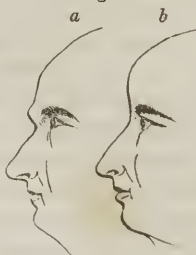
A large Individuality is absolutely necessary to enable one to arrive at eminence in practical life. An artist, however well developed his head may be in other respects, if this organ of *general attention*, be small, he will be likely to overlook some of the less obvious details of his performance, and when a critic points out an error, he will exclaim—"Oh! I did not *see* that!" and yet perhaps his vision is perfect.

The author, who has it large, uses many nouns. The "Iron bound bucket," by Woodworth, is a beautiful illustration.

"How dear to my heart are the scenes of my childhood,
 When fond recollection recalls them to view,
 The orchard, the meadow, the deep-tangled wildwood,
 And every loved spot which my infancy knew;
 The wide-spreading pond, and the mill that stood by it,
 The bridge and the rock where the cataract fell,
 The cot of my father,—the dairy-house nigh it,
 And e'en the rude bucket that hung in the well.
 That old oaken bucket,
 That iron-bound bucket,
 That moss-covered bucket that hung in the well.

The ancient physiognomists remarked, that their great men were full at the top of the nose, and all their portraits and busts that have come down to us, show them to have been large in this part, which was evidently mistaken for a part of the nose. I have never yet seen a great general, statesman, mechanic or naturalist, who was very small here. I have seen high, wide and full foreheads, upon persons who were little less than fools, on account of a deficiency in this important organ. Again, I have seen persons with this very large, who were, notwithstanding, perfect idiots, on account of the great deficiency of the reflectives.

Fig. 3.



[Large and small Individuality.]

Individuality not only receives impressions from external objects, but it also receives and recognizes impressions from the internal organs; the *consciousness* which we feel of the existence of emotions and thoughts, depends on this organ, in connection with Eventuality.

We have then a correct idea of the external senses when we consider them as instruments of communication between the external world and Individuality. And we have correct ideas of Individuality, when we consider it the organ where all impressions are received and recognized, both from external objects and internal organs. But we must not confound the power of perceiving the *existence* of things and ideas, and feelings, with the power of perceiving the *qualities* and *relations* of things, such as their form, size, color, density, arrangement, action, &c.; these depend upon other organs, which I shall proceed to explain in the order in which I find them developed.

2. CHEMICALITY.

“Who taught the nations of the field and wood,
To shun their poison and choose their food?”—*Pope*.

This may be defined the perception of those chemical qualities of bodies which affect the senses of taste and smell. If we admit that the senses do not *perceive*, but only *convey* impressions, we shall be obliged to acknowledge that this faculty depends upon an organ of the brain.

The analogy is perfect between this organ and the organs of Tune and Color—the same principles must be applied to the senses of taste and smell, that are admitted with reference to hearing and sight. The sense of taste conveys impressions of savour, but it is Individuality that perceives the existence of the objects that affect us, and the faculty of

Chemicality perceives the sensible chemical qualities of the objects; it enables us to judge whether they are sweet or bitter, sour or acrid, just as the organ of Color perceives blue, green, yellow, or red. I was led to the discovery of this organ, by repeatedly observing that the power of discriminating the qualities of food was not in proportion to Alimentiveness: I found many persons with large Alimentiveness, who, although addicted to intemperance in eating and drinking, were indifferent with regard to the quality of their food. Others, again, were remarkably particular and nice concerning their food, and could distinguish with astonishing accuracy the flavor of different wines and dishes, and yet were not disposed to indulge immoderately in their use. In these latter persons I found Alimentiveness small, but they were remarkably developed *before* Alimentiveness, and were prominent just under the eyes and near the nose; there was great comparative length from the ear to the base of the middle of the nose. These observations naturally suggested the idea, that the *propensity* to acquire food, and the *perceptive faculty* which ascertains the quality of food, depend on two separate organs.

After making many observations, I ventured to mention the subject to some of my scientific friends, and in every instance, they have, after repeating my observations, admitted their correctness; I therefore consider the organ as established. I have never yet found it small in those who were good judges of liquor. I have found it rather large in negroes, while Alimentiveness is medium, and accordingly they are excellent cooks, and yet are generally temperate, notwithstanding their degraded condition.

In looking at the brain to ascertain the precise part that produces the external fullness, I found a distinctly marked convolution at the internal part of Alimentiveness, and at the very root of Individuality. (See plate of the base of the

brain.) After much examination and comparison, I am satisfied that this is the organ. It is large in the brain of the idiot girl of Cork, (a cast of which has been published) and the external prominence in the cast of the head of the same girl, is in perfect agreement; indeed, it is large in every idiot I have seen, when the idiocy was caused by deficiency of the reflectives.

It would at first seem improbable that a convolution, situated so far back from the face, would produce an external appearance which could enable us to judge of its size; but the same objection is equally forcible in regard to the organ of Language, which, although smaller than Chemicality, yet produces an effect upon the eyes so great, that it led to the discovery of phrenology. The organ of Chemicality gives prominence to the bones under the eye, upon the same principle that the organ of Language gives prominence to the eye itself. It is also worthy of remark that the olfactory nerve is continued into this organ, and not into Alimentiveness, as is commonly supposed.

I attribute to Chemicality all the perceptive powers that physiologists have hitherto ascribed to the senses of taste and smell, and I cannot better illustrate my ideas, and shew the importance of the faculty than by the following quotation from Dunglinson's excellent work on physiology. Speaking of the sense of smell, he says:

"It enables the chemist, the mineralogist, and the perfumer to discriminate bodies from each other. We can, likewise, form a slight, but only a slight, idea by it, regarding the distance and direction of bodies, owing to the greater intensity of odours near an odorous body, than at a distance from it. Under ordinary circumstances the information of this kind, which we derive by olfaction, is inconsiderable; but in the blind, and in the savage, who are accustomed to exercise all their external senses more than the civilized indi-

vidual, the sphere of activity and accuracy of this sense is largely augmented. Of this we shall have to speak presently.

“ We find it, too, surprisingly developed in some animals; in which it is considered, by the eloquent Buffon, as an eye that sees objects not only where they are, but even where they have been; as an organ of gustation, by which the animal tastes not only what it can touch and seize, but even what is remote and cannot be attained; and he esteems it a universal organ of sensation, by which animals are soonest and most frequently impressed, by which they act and determine, and recognize whatever is in accordance with, or in opposition to their nature. The hound, amongst quadrupeds, affords us a familiar example of the extreme delicacy of this sense. For hours after the passage of game, it is capable of detecting the traces; and the bloodhound can be trained to indicate the human footsteps with unerring certainty. In the case of the carnivorous birds, we have signal instances of the accuteness of either the sense of smell or vision.

“ Which of these ought to have the credit, it is difficult to say, and of course, almost impossible to demonstrate, by direct experiment. Those that have been hitherto instituted, are more in favor of the latter, than the former. The turkey-buzzard of the United States of America, is a bird of this class; and it is surprising to see how soon they will collect from immense distances after an animal has died in the forest.

“ Humboldt relates, that in Peru, Quito, and in the province of Popayan, when they are desirous of taking the gigantic Condor, they kill a cow, or a horse, and in a short time the odour of the dead animal attracts those birds in great numbers, and in places where they were scarcely known to exist. It is asserted, too, that vultures went from Asia to the field of battle at Pharsalia, a distance of several hundred

miles, attracted thither by the smell of the killed ! Pliny, however, exceeds almost all his contemporaries in his assertion on this matter. He affirms, that the vulture and the raven have the sense of smell so delicate, that they can foretell the death of a man three days beforehand, and in order not to lose their prey, they arrive at the spot the night before his dissolution !

“ As the organ of smell, in all animals that respire air, is situated at the entrance of the organ of respiration, it is probable that its seat, in insects, is in the mouths of the air-tubes. This sense appears to guide them to the proper kinds of food, and to the execution of most of the few offices they have to perform during their transient existence. Occasionally, however, they are deceived by the resemblance between the odours of substances very different in other qualities. Some plants, for example, emit a cadaverous odour, similar to putrid flesh, by which the flesh-fly is attracted and led to deposite its ova in parts that can furnish no food to the future progeny.

As regards the extent of the organ of smell, man is undoubtedly worse situated than most animals, and all these being in other respects equal, it may be fair to presume that those in which the olfactory membrane is most extensive, enjoy the sense of smell most exquisitely. It is curious, however, that animals which possess the sense of smell in the highest degree, are those that feed on the most fetid substances. The dog, for instance, riots in putridity; the birds of prey, to which reference has been made, have similar enjoyments. The turkey buzzard of the United States is so fetid and loathsome, that his captors have generally been glad to loose him from bondage; and it is affirmed, that if his ordinary fetor is insufficient to produce his release, he affords an irresistible argument, by ejecting the putrid contents of his stomach upon his possessor ! One inference

may however be drawn from this *penchant* of animals with the most exquisite olfactories for putrid substances:—that the taste of the epicure for game, kept until it has attained the requisite *fumet*, is not so *unnatural* as it might at first sight appear.

“Like the other senses, the smell is capable of great improvement by education. The perfumer arrives, by habit, at an accurate discrimination of the nicest shades of odours; and the chemist and the apothecary employ it constantly to aid them in distinguishing bodies from each other; and in pointing out the changes that take place in them, under the influence of heat, light, moisture, &c. In this way it becomes a useful chemical test. The effect of education is likewise shown, by the difference between a dog, kept regularly accustomed to the chase, and one that has not been trained. For the same reason in man, the sense is more exquisite in the savage than in the civilized state. In the latter, he can have recourse to a variety of means for distinguishing the properties of bodies, and hence he has less occasion for acuteness of smell than in the former; whilst, again, in the civilized state, numbers destroy the sense, in order to procure pleasure. The use of snuff is one of the most common of these destructive influences.

“Of the acuteness of the sense of smell in the savage, we have an example, on the authority of Humboldt; he affirms, that the Peruvian Indians, in the middle of the night, can distinguish the different races by their smell,—whether European, American Indian, or negro.

“To the same cause must be ascribed the delicacy of olfaction, generally observed in the blind. The boy MITCHELL, who was born blind and deaf, was able to distinguish the entrance of a stranger into the room by the smell alone. A gentleman, blind from birth, from some unaccountable impression of dread or antipathy, could never endure the

presence of a cat in the apartment. One day, in company, he suddenly leaped up, got upon an elevated seat, and exclaimed that there was a cat in the room, begging them to remove it. It was in vain that the company, after careful inspection, assured him that he was under an illusion. He persisted in his assertion and state of agitation; when, on opening the door of a small closet in the room, it was found that a cat had been accidentally shut up in it."

I consider the faculty of Chemicality sufficiently general to embrace all the impressions, both of smell and taste, and in this respect it is analogous to the faculty of Form, which perceives *forms*, either through the medium of touch or sight.

"Regarding the uses of the sense of taste," says Dunglinson, "its immediate function, as has been remarked, is to give the sensation of savours. This function, like the touch, is instinctive, requires no education, cannot be supplied by any of the other senses, and is accomplished as soon as the tongue has acquired the necessary degree of development. To this it may be replied, that the very young infant is not readily affected by savours. In all cases, however, certain sapid bodies excite their usual impressions: and in the course of a few months, when the organ becomes completely developed, the sense acquires a high, and often an inconvenient degree of acuteness.

"To appreciate a savour accurately, the sapid substance must remain for some time in the mouth: when rapidly swallowed the impression is extremely feeble, and almost null. Of this fact we take advantage, when compelled to swallow any nauseous substance: whilst we retain a savory article long in the mouth, in order that we may draw from it all its sweets. How different, too, is the consent of the auxiliary organs under these two circumstances. Whilst a luscious body augments the secretion of the salivary glands, or causes the mouth "to water," as it has been

called, projecting the saliva, at times, to a distance of two feet from the mouth, and disposing every part to approach and mingle with it; a nauseous substance will produce constriction of every secretory organ, and this effect will extend even to the stomach itself, so that it will often reject the offending article as soon as it reaches the cavity. We can thus understand how, *cæteris paribus*, an article, which is pleasing to the palate, may be more digestible than one which excites disgust, and *vice versa*.

“Of the “consent of parts,” exerted by the stomach on the organ of taste, we have a familiar illustration in the fact, that whatever may be the *gout*, with which we commence a meal on a favorite article of diet, we find that the relish becomes blunted as the stomach becomes filled: and hence the Romans were in the habit of leaving the table once or twice during a meal, and, after having unloaded the stomach, of returning again to the charge—“*vomunt ut edant, edunt ut vomant.*”

“Among animals we see great diversities in this sense. Whilst none possess the refined taste of man, there are many that are capable, by taste or smell, of knowing those plants which are nutritious, from those that are noxious to them; and it is very unusual for us to find that an animal has died from eating those that are unquestionably poisonous to it. Yet, as we have remarked, a substance, which is noxious to one, may be eaten with impunity by another: and if we select animals, and place them in a field containing plants, all of which are ranked by us as poisons, and which are poisonous to a majority of those animals, we find that not only has a selection been made by each animal of that which is innoxious to it, but that the substance has furnished nourishment to it, whilst to the other it would have proved fatal. All this must be dependent upon peculiar and inappreciable organization.

“The sense of taste is, more than any other, under the influence of volition. It is provided with a muscular apparatus, by which it can be closed or opened at pleasure; and, in addition, it ordinarily requires the assistance of the upper extremity, to convey the sapid substance to the mouth. The sense can, therefore, be exercised *passively* or *actively*; and by cultivation, is capable of being largely developed. The spirit taster to extensive commercial establishments exhibits the truth of this in a striking manner. He has, of course, in his vocation, not only to taste numerous samples, but to appreciate the age, strength, flavour, and other qualities of each: yet the practiced individual is rarely wrong in his discrimination. With almost all, if not all, the custom is to take a small quantity of liquor into the mouth, throw it rapidly around that cavity, then eject it. A portion in this way comes in contact with every part of the membrane, and of course, impresses not only the lingual branch, but the other ramifications of the fifth pair.

“The *gourmet* of the French, somewhat more elevated in the scale than our ordinary epicure, prides himself upon his discrimination of the nicest shades of difference and of excellence in the materials set before him. Many *gourmets* profess to be able to pronounce, by sipping a few drops of wine, the country whence it comes and its age; and, according to Stelluti, can tell by the taste, whether birds, put upon the table, are domesticated or wild—male or female: Dr. Kitchener, indeed, asserts, that many epicures are capable of saying in what precise reach or stretch of the Thames the salmon on the table has been caught. Such acuteness of sense is by no means desirable. Doomed to meet in his progress through life, with such a preponderance of what demands obtuseness rather than acuteness of feeling, the epicure must be liable to continual annoyances and discomforts, which the less *favoured* can never experience.”

Every chemist will perceive the propriety of naming this organ Chemicality, since the taste and smell of all substances depends upon their chemical composition; and a change of taste or smell is always a chemical change.

3. LANGUAGE.

“To him who in the love of nature, holds communion
With her visible forms, she speaks a various language.”—*Bryant.*

Language is the perception of the manifestations of mind. The mental process is concealed from observation, beneath the silent and mystic convolutions of the brain. Not so the manifestations of mind—the contractions of the muscles, producing voice, and the motions of the limbs and features, these enable animals to indicate their thoughts and feelings, in such a manner that other animals, possessing the same organization, readily understand them. Animals do not, like men, connect by a process of reasoning, the motions and sounds, or other signs of ideas with the ideas themselves, in which the signs originate; but they are endowed with an instinctive perception, which is perfectly adapted to certain animal motions and sounds, so that, as soon as they are born, they can understand the signs of the mother inviting them to feed, or warning them of danger. This view of Language, is in agreement with its location at the base of the brain, near the root of Individuality. It must certainly be possessed by all animals that have any communication with their own species, or attend to the wants of their young. Those phrenologists, therefore, who consider Language peculiar to man, and rank it next in dignity to the reflective faculties, cannot be well acquainted with the natural

history of animals; and they must also have overlooked the situation of the organ in the brain.

Man uses artificial language, for the same reason that he uses artificial clothes, tools, and a thousand other things, which his superior reasoning power has enabled him to invent. Having invented an artificial language, it is the organ under consideration which enables him to learn it with facility and remember it with ease. It is plain that it requires more judgment to understand artificial than natural language, as the one is directly adapted to our faculty of Language, and the other is adapted to our faculty of Language *combined* with the reflecting powers that invented it. This is the reason why animals, and some idiots cannot learn artificial language, although they readily understand natural language; because the latter requires no effort of reflection, whereas the former originated in human judgment, and can be understood only by human judgment.

In every well organized mind, this organ will bear a regular and just proportion to the other organs; but sometimes it is disproportionately small, and then the individual is concise, brief and slow in writing—reserved and hesitating in speech—frequently forgetting the most familiar terms. There is a merchant in Massachusetts, who, it is said, frequently forgets his own name; and is sometimes obliged to go and look at his sign to refresh his memory.

But if the organ be uncommonly large, there will be an inexhaustible magazine of words at command, even though there may be a great scarcity of ideas; such individuals are apt to repeat their ideas in different words, as the Irishman did, who posted upon a bridge the following notice: “All persons, of every description, hereafter, for the future time to come, may pass over this bridge, free, gratis, for nothing, without paying a cent.”

Some individuals seem to take pleasure and pride in the

use of technical terms, and learned and high-sounding phrases, and like Goldsmith's schoolmaster,

“ With words of learned length and thundering sound,
Amaze the gazing rustics ranged around.”

Now, although it may be Approbativeness that prompts them to use such terms, it is large Language which enables them to do it with ease. It is astonishing with what facility some writers and speakers, pour forth a flood of indefinite words, upon a subject which might be expressed in a few short sentences. On the other hand, we see individuals whose gigantic intellects, survey at a single glance the whole circle of the sciences, and yet in a sudden emergency, cannot find language to express themselves intelligibly upon the most familiar and ordinary topics. But a distinction must be understood between a facility of conception and a facility of expression. This will be explained under Comparison.

4. FORM.

Duchess. Thou wouldst not have recognized thy father,
Wouldst thou, my child ?

Thekla. O yes mother! at the first glance! my father is not altered;
The form that stands before me, falsifies
No feature of the image that hath lived
So long within me.—*Coleridge.*

This is the perception of the outline or configuration of the objects which are noticed by Individuality. The productions of natural organization are always regular and uniform, and this organ is so adapted to the forms which nature produces, that it instinctively prefers them to those objects which are, like the earth before creation, “without form;” that is, without systematic and useful form. The bee, the

beaver, and birds, manifest this faculty in a wonderful manner. How perfect the forms of the honey-comb, the web of the spider, and the hut of the beaver! This cannot, in them, be attributed to Perfectiveness, or Causality; they have not reasoned to the logical conclusion, that such forms are best calculated to serve their purposes; nor have they such a propensity to improve, that they have been able to arrive, by experience, to such perfection; on the contrary, they inherit with their organization, the perception of form, instinctively adapted to the most perfect and beautiful regularity; so that as soon as they are born, they manifest a preference for those forms which are best suited to their structures.

Spurzheim thinks that ideas of roughness and smoothness depend on Form. It is principally by means of Form that animals are capable of distinguishing one object from another. A large developement of this organ also accounts for the extraordinary power which some persons possess, of remembering faces; Cuvier, the celebrated Naturalist, could remember for years, the forms of animals which he had seen, and could draw them from memory with great accuracy. The talent for drawing is almost entirely dependent on this organ. When Language and Form are not in proportion to each other, persons can remember the names and not the faces, or vice versa, of their acquaintances. I knew a gentleman in Auburn, N. Y., who called into a store, to see an acquaintance, but not finding him in, enquired of the clerk—"Is Mr.—Mr.—Mr.—r—r—you know who I mean,—is he in?" "O yes," said the clerk, "I know who you mean, it is Mr.—Mr —Mr—r—r—No! he is not in,"—and they parted in mutual embarrassment. Dr. Gall relates of himself, that he could not recollect a person who dined by his side, if in the afternoon he met him in the street. Dr. D. of Ann Arbor, Mich., assured me, that it was to him a frequent

source of embarrassment, that persons would come up to him, and claim to be his intimate acquaintances, and he was ashamed to say, he did not know that he had ever seen them before.

Authors who have it large, are prone to describe the configuration of the objects which they introduce, and in their works of fiction,

“Imagination bodies forth the forms of things unknown.”

5. SIZE, OR EXTENSION.

“A boundless sea forevermore,
Without a bottom or a shore.”—*Watts*.

This is the faculty which perceives the extension, distance, space, or magnitude of bodies which are recognized by Individuality.

When applied to a plurality of objects, at different distances, at the same time, it is called perspective. Combined with Form, it gives the talent for perspective drawing, and a fondness for landscapes, in preference to other kinds of drawing. The same remarks which were made concerning the adaptation of the forms of bodies to the perceptive organ of Form, will apply with equal truth to their size: throughout all nature, the magnitude of bodies is exactly suited to their condition, and the purposes that they are to subserve. There is a proportion between a mountain-top and its base, and a regular gradation of size between the two extremes. Minerals, vegetables, and animals are as regular in size as in form; and the organ of Size is adapted to perceive and delight in this beautiful harmony which is inherent in all the productions of nature.

Our language abounds in words expressive of size and distance, and those authors who have it very large, make a frequent use of them.

Language, Form and Size, are large in the bust of Milton, while Individuality is only medium, and accordingly he introduces few natural objects; his

“Rapt fancy builds an empire of its own.”

but having introduced an object, he abounds with adjectives of form and size, with which to describe it; thus in describing Sin and Death—

The one seemed woman to the waist, and fair,
 But ended foul in many a scaly fold,
 Voluminous and vast. * * * *
 * * * * The other shape,
 If shape it might be called—that shape had none
 Distinguishable in member, joint, or limb,
 Or substance might be called that shadow seemed,
 For each seemed either:—

Again in describing Satan, nothing can surpass the effect with which he uses adjectives of size and distance:

Nine times the space that measures day and night
 To mortal men, he with his horrid crew
 Lay vanquished, rolling in the fiery gulf.
 * * * * * * * *
 At once, as far as angels ken, he views
 The dismal situation, waste and wild.
 * * * * * * * *
 As far removed from God and light of heaven,
 As from the centre thrice to the utmost pole.
 * * * * * * * *
 With head uplift above the wave, and eyes
 That sparkling blazed, his other parts beside
 Prone on the flood, extending long and large,
 Lay floating many a rood, in bulk as huge,
 * * * * As that sea beast Leviathan,
 Which God, of all his works, created hugest
 That swim the ocean stream.
 * * * * * * * *

So stretched out huge in length the arch-fiend lay,

* * * * *

Forthwith upright he rears from off the pool

His mighty stature.

* * * * *

* * * His ponderous shield,

Ethereal temper, massy, large, and round,

Behind him cast; the broad circumference

Hung on his shoulders like the moon.

* * * * *

His spear, to equal which, the tallest pine

Hewn on Norwegian hills to be the mast

Of some great admiral, were but a wand

He walked with, to support uneasy steps

Over the burning marl. * * * *

Collecting all his might, dilated stood,

Like Teneriffe or Atlas, unremoved;

His stature reached the sky, and on his crest

Sat horror plumed.

5. WEIGHT.

“And earth, self-balanced, on her centre hung.”—*Milton*.

The perception of weight, density, gravitation, attraction, momentum, force or equilibrium. Gravitation is one of the most important laws of nature, and this faculty is adapted to perceive its effects. When we touch any substance, Individuality perceives its existence; but when we change its position by muscular force, we acquire ideas of its solidity and weight.

There is an intimate relation between the size of bodies and their weight, since the weight of bodies, all other things being equal, is in exact proportion to their size. In the solar system, the planets manifest a degree of power proportionate to their magnitude; so also on the surface of the earth,

the weight of bodies is equal to their density and size. The forms of things are also related to their weight—thus the heavenly bodies, mountains, vegetables, and animals, are formed with reference to the laws of gravitation; and in artificial structures, if the artist departs from this principle he shocks the common sense of mankind. Even in dress, we unconsciously conform to this perception, and therefore large sleeves, or very broad crowned-hats, cannot long be popular.

Animals that are very low in the scale, manifest this faculty with as much skill as the most profound philosopher: The caterpillar crawls to the end of a limb, and extends itself as far as it can reach, and if it finds nothing to rest upon, returns the way it came, but never loses its balance.

“The nymphs of watermoths, commonly called *codbait*, cover themselves with pieces of wood, or gravel. It is necessary that they should keep in equilibrium with the water, and, when they are too light they add to themselves a piece of gravel, and when too heavy, a piece of wood.” Fishes are furnished with a peculiar pneumatic apparatus, that enables them to sustain themselves in the water in opposition to the gravitation of their bodies; and birds have their bones made light and thin, and so contrived that their breath, instead of being confined to a pair of lungs, is extended into the hollow of their bones, and into different parts of the body, in order to render them light and buoyant. Thus we see that animals have perceptions of the weight of bodies, and act in harmony with the laws of gravitation according to their size and form.

I have uniformly found this large on those who were good judges of the mechanical forces, and in artists whose success depends upon their faculty of bringing force to bear with skill, precision and delicacy; such as smiths, machinists, musical performers, horsemen, engineers, rope-

dancers, &c. I found it small on the head of a young lady in the Troy Female Seminary, who excelled in vocal music but was an indifferent performer on the piano and harp.

I found it large, and Caution moderate, on a young lady in Buffalo, who walked over a frightful precipice on a narrow plank where even the men dared not follow her.

It was large in Sir Isaac Newton, and it is said that the falling of an apple attracting his attention, commenced in his mind the train of thought which resulted in developing the true theory of gravitation; but had it been small in his head, would the falling of the apple have excited in his mind such a train of thought ?

It was very large in the head of Watt, the celebrated engineer; so also was Size; and he not only improved the steam engine, but he also invented a curious machine for perspective drawing. I found it very large in a stranger whom I examined in the presence of my class in Troy, N. Y., and being combined with large reflectives, I ventured to remark that if he were a mechanic, he would be likely to suggest improvements in the power of machinery, and I was afterwards informed that the individual was the inventor of the rotary engine—William Avery, of Syracuse.

The organ was large in Homer, (if we may depend upon the authenticity of the bust said to be his;) he certainly manifests it more frequently, and expresses it more beautifully than any other poet. He varies in every possible manner the mode of expressing the force with which his heroes hurled their weapons at each other.

Beattie also has this large, and his poem of the Minstrel, commences:

Ah, who can tell how hard it is to *climb*
The steep where fame's proud temple
Shines afar.

Again he describes the wandering minstrel,

While from his *bending* shoulders decent hung,
His harp, the sole companion of his way,
Which to the whistling wind *responsive* rung.

And oft the craggy cliff he loved to *climb*,
When all in mist the world below was lost,
And hear the voice of mirth and song *rebound*,
Flocks, herds, and *waterfalls* along the hoar profound.

And hark! the river, bursting every mound,
Down the vale thunders; and with wasteful sway,
Uproots the groves, and rolls the shattered rocks away.

7. COLOR.

'Tis sweet in the green spring
To gaze upon the wakening fields around;
Birds in the thicket sing—
Winds whisper, waters prattle from the ground,
A thousand odours rise,
Breathed up from blossoms of a thousand dies.—*Bryant.*

The seven primary colors, in their different degrees of brilliancy, and their innumerable combinations, producing an endless variety of hues, tints and shades, constitute an interesting department among the properties of matter. Were it not for this, what a disagreeable sameness would the appearance of nature present! Those who have this organ large, are very fond of variegated scenery—of flowers—of paintings and, of party-colored decorations. It is larger in women than men, and accordingly they universally wear a greater diversity of colors, and are more fond of flowers than men. Botany is their favorite science, in which they make greater proficiency than in any other natural science.

This organ, when large, gives an arched appearance to

the brow, and any one who will take the trouble to look at a collection of portraits of celebrated painters, will at once acknowledge this common peculiarity.

Mr. French, of Springfield, Mass., cannot in the night, distinguish one color from another, yet his vision is perfect, and no mechanic in the U. S. Armory, can sooner perceive any inequality upon the surface of machinery. In this gentleman, there is an uncommon depression in the place of the organ of Color, but Weight and Size are very large.

It must be remembered that *coloring* is but *one* of the elements of the talent for painting. It is large in Titian, Rubens, and all those painters who have excelled as colorists.

8. ORDER.

Order is heaven's first law.—*Pope.*

The operations and productions of nature, being the result of universal and general laws, uniformity and order is the necessary consequence. Thus, one general law operating upon vegetable and animal substances, produces regularity of arrangement among their fibres. The general law of attraction, explains the regularity with which minerals chrystalize. One general cause disturbing the ocean, produces regularity among the waves; but if several causes operate at once, the order is destroyed. Order may therefore be defined to be, that arrangement among material bodies, which is produced by the operation of a general cause.

It is the province of this faculty to perceive the order that reigns throughout the universe, but it does not perceive the general causes that produce it; thus, when a powerful magnet passes near a handful of iron filings, an unseen

power causes the particles to arrange themselves in the most perfect order; now it is this faculty that perceives the regularity, and is gratified with it, but it is Causality that perceives magnetism to be the cause of the arrangement.

Order is intimately related to all the preceding organs of Form, Size, Weight and Color, since it is itself constituted of the uniform operations of these four principles; thus, when objects, as the waves, or fibres, or chrystals, are in order, it is because they are of the same form, size, distance, density or color.

The mechanical animals manifest Order in a most remarkable manner; who has not admired the regularity with which the spider arranges the thread of his web, the bee the cells of his honeycomb, or the bird the materials of her nest?

We are now prepared to understand the nature and operation of the faculty of Order in the human mind. Those who have the organ very large, are apt, unconsciously, to arrange in order, whatever material objects occupy their attention. A retail merchant, for instance, has his attention (his Individuality,) continually occupied with the numerous articles that constitute his stock; and, if he has order very large, he will instinctively, and unconsciously arrange, and keep them in order; yet he may neglect his garden, or his library, because his attention is directed to another subject, of all-absorbing interest; as soon, however, as his mind is relieved from business, and he has leisure to attend to his garden, or his library, he will manifest the same degree of order there, that he previously did in his store. This will explain the apparent anomaly which some persons present, who are remarkably orderly in some things, and neglectful in others. I know some students, who are very neat and orderly in regard to their papers and books, but careless of their personal appearance; while others are careless of every

thing but their dress; this is all easily explained by the relative developement of Intellect and Approbativeness, and the circumstances which have directed their attention to different subjects.

Good clerks, and accomptants, have this large; and it is of the greatest importance to merchants, especially if they have it small themselves, to select assistants who have it large. It is also large in females, and they are proverbial for their habits of putting things "to rights."

Order must not be confounded with *system*, which is the result of Reflection. I know many individuals who are very systematic—they plan well, but they need an assistant continually at their elbows, to execute their plans in an orderly manner. I know others, who are remarkable for order, but are totally incapable of conceiving a complicated and systematic plan.

9. NUMBER.

Hadad. What knowest thou of the stars?

Tamar. I know them numberless, resplendent, set
As symbols of the countless, countless years
That make eternity.—*Hillhouse.*

The multiplicity of objects that are of the same apparent form, size, weight, colour, and order, would involve the mind in the greatest perplexity, did we not possess this faculty of counting, or perceiving plurality. Objects that differ from each other in regard to any of the five qualities which I have already described, can be distinguished from each other by appearances; but objects which are alike in

their appearance, cannot be distinguished from each other without the use of numbers; thus, if we see twenty posts, at such a distance that they all appear alike, we can designate one from another only by numbers.

I would here respectfully point out an error into which some good phrenologists have fallen, in supposing that Order should be preceded by Number, in the arrangement of these organs. Mr. Combe, 397 page says:—"Order supposes a plurality of objects, but one may have ideas about a number of things, and their qualities, without considering them in any order whatever." And he accordingly ranks Number before Order. Spurzheim also says: "The idea of order supposes plurality, but number may exist without order." Now I acknowledge that there cannot be order without number; but it does not follow that we must *perceive* number before we perceive order.

Let me ask what *can* there be without number; do not the five senses, and Individuality—does not the organ of Color, adapted as it is to the seven primary colors, suppose the existence of plurality? does not our very existence, "suppose a plurality of objects," previously existing?

But Mr. Combe says: "We may have ideas about a number of things without considering them in any order whatever." I reply, so may the animals, that are destitute of both Order and Number; but all animals do not have ideas of several things of the same appearance at once; they certainly have ideas of a number of things, but not *as numbers*. I once knew an idiot, who, although he could not count ten, yet, out of his father's flock of fifty sheep, if one was missing he was always the first to discover it; for he knew every one of them by some peculiar mark; and he had names for them, expressive of their peculiarities, such as crook-horn, smut-face, &c.; but he could not distinguish the difference between a lot of thirteen eggs and another lot of

a dozen. Again I reply, we may also have ideas about the order of things, without having any idea of their number. This same idiot, who could not count ten, was yet extremely fond of order. Dr. Spurzheim mentions that the Sauvage de l'Avignon at Paris, though an idiot in a very high degree, cannot bear to see a chair, or any other object, out of its place. He also saw, in Edinburgh, a girl who, in many respects, was idiotic, but in whom the love of order was very active. She avoided her brother's apartment, in consequence of the confusion that prevailed in it.

Again, the lower animals manifest order in the most perfect and astonishing manner, but they manifest number very imperfectly. Spurzheim says: "I am not certain whether this faculty (Number,) exists in animals." Combe also remarks: "It seems difficult to determine whether the faculty exists in the lower animals or not." This fact alone would seem to decide the question of precedence in favor of Order. Another important fact is, that in ordinary transactions we always use order before number.* When we wish to count a number of articles, we arrange them in some order, that we may perform the operation with greater facility; for if the articles are in confusion, we find it next to impossible to count them. These two organs are of the greatest importance to merchants. Those who have the organ of Number large, can compute, without using the slate, with a rapidity and accuracy which to others is incomprehensible. This faculty does not give the ability to solve difficult arithmetical problems, it only gives the power to perform with rapidity and accuracy any operation in addition, subtraction, multiplication, or division; but it must be combined with higher powers, to produce skill in the higher and more difficult branches of mathematics. Zerah

*I am indebted to a lady for this suggestion.

Colburn, the youth who astonished the world with this talent, was but an ordinary mathematician; and accordingly his organ of Number was very large, but Causality moderate. Both Order and Number are large in the bust of Washington, and his whole life was in harmony with this fact. In the papers in his own hand writing which he has left behind, though very voluminous, every I is dotted, every T crossed, and scarce a blot to be found upon them. His accounts were kept in the most regular manner, and perfectly correct.

This organ is large in the bust of Alexander Hamilton, and in La Grange, the greatest of French mathematicians.

MIDDLE RANGE OF PERCEPTIVES.

10. DIRECTION, OR LOCALITY.

There is a power whose care
Teaches thy way along that pathless coast,—
The desert and illimitable air—
Lone wandering but not lost.—*Bryant to a Waterfowl.*

This may, I think, be defined the perception of the *direction* of objects, or the perception of the points of the compass. Dr. Gall calls it “the memory of places,” Dr. Spurzheim states that “the special faculty of this organ, remains to be determined. It seems to me,” says he, “that it is the faculty of Locality in general. As soon as we have conceived the existence of an object, and its qualities, it must necessarily occupy a place, and this is the faculty that conceives the places occupied by the objects that surround us.” Sir George S. Mackenzie considers the primary faculty to be that of perceiving relative positions.”

It is certain that the part is largely developed in the heads

of all celebrated travellers, geographers, geometricians, &c. but I neither agree with Gall, "that it alone gives the memory of places," nor with Spurzheim, that it is "the faculty of locality in general," nor yet with Sir G. S. Mackenzie, that it "perceives relative positions." I conceive it to be simply the perception of *direction*. Place, or locality is a complex perception. To perceive a place, requires the action of Individuality, Form and Size, besides the faculty under consideration. When we know the form, and size, and distance, and color of a thing, we may yet be totally ignorant of its place; but now if we are informed of its direction, our idea of its place is complete. Again, we may have a correct idea of the direction of an object, and know nothing of its form, or size, or distance, or color, and we may also be ignorant of its adjacent parts; we cannot then be said to know its place. It will now be perceived that the idea of place is complicated, while the idea of direction is simple. The same reasoning is opposed to its being called "the perception of relative positions," as that is a still more complicated idea, since it implies a knowledge of several places or positions.

Migratory animals manifest this faculty in a much greater degree than man. Swallows, pigeons, geese, and many other birds of passage, possess a power of this kind which has always been a subject of wonder. The periodical migration of animals, was by Dr. Gall, accounted for, by supposing a periodical and involuntary excitement of this organ. But it seems to me more reasonable that the propensity to migrate depends upon a peculiar mode of action of Inhabitiveness. In explaining the organs, it must be continually borne in mind, that *actions* are produced only by the Propensities; and that the Intellectual organs merely *perceive* objects, and their qualities and relations. The Propensities urge on the actions, and the Intellectuals direct the actions to

proper objects, and find out ways and means to gratify the Propensities.

When this organ is large in an author, combined with Individuality and Size, he describes locations with great minuteness and truth. James Fennimore Cooper is endowed with this combination, and all his works are illustrations of its manifestation. In his descriptions of nautical and of Indian character, he is without a successful rival. His *Pilot* is an admirable illustration of this faculty. He is represented as steering the vessel among rocks and shoals, through a thousand dangers that seem each instant to increase in magnitude; but with a firm and decided voice, and a calm spirit, he gives each necessary order; and with his own master hand guides the noble ship in safety.

II. EVENTUALITY, OR ACTION.

Sit at the feet of history—through the night
Of years the steps of virtue she shall trace,
And shew the earlier ages.—*Bryant*.

This faculty perceives action, motion or change. It is the source of verbs, as Individuality is the source of nouns. It is the foundation of the talent for relating events, narratives, anecdotes and histories. It is found large in all good historians. It is large in children, and accounts for their love of stories.

It is large in those who excel in chemistry, since they must not only notice substances, and describe chemical qualities, but also *operations* must be conceived, and processes that take place during the chemical combinations, must be understood, before certain deductions can be drawn, or successful experiments conducted. It is the principal element

in the talent for physiology, since that science explains the action, or history of organs. It is also an assistant to the machinist, who must not only have a correct idea of the structure of machines, but also of their action or operation.

It is also essential to the physician, to enable him to judge of the morbid action of the constitution, and also of the operation of the drugs which he employs. It also calls to his mind the history of analogous cases, in all their minute details, thus enabling him to profit by experience. It induces him further, to enquire into the previous history of the patient, and thereby to judge more correctly of the probable causes of his present state, and of the best remedy. The public speaker is greatly dependent on this faculty, to furnish facts, and the history of the transactions to which he alludes.

It is large in historical painters, and those who can successfully represent objects in action; Hogarth is a good instance of this; he has the organ large, and all his works represent action most admirably. The painter who has it small, fails to give expression to his portraits, and animation to his scenes. I lately detected a painter in a falsehood, in the following singular way. He was painting a family piece in which three children were represented tossing a child in their arms in a sportive manner; the company, consisting of several ladies and gentlemen, were admiring the design, and he was taking great credit to himself for his success. Observing that Eventuality was very small in his head, I almost unconsciously exclaimed, *you did not design that piece!* He immediately advanced to me, and in a whisper, requested me to say no more about it until the company were gone: he then acknowledged that he did not design it, but took it from a book, which he supposed I had seen.

It is generally small in criminals, and those who do not learn from experience. Some one has remarked, that "his-

tory is Philosophy teaching wisdom by example." The organ is large in Hume, Gibbon, the Empress Catharine of Russia; and very small in Zeno, Moore, &c.

Gall considered it the organ of educability, because those who had it large were easier educated. He also thought, with Camper and Lavater, that animals are tamable in proportion to the fullness of this part. It is certain that tame animals are fuller in the centre of the forehead, than wild ones of the same genus. The domestic cat and the wild cat differ in this region, and the hyena is greatly depressed in the same part.

12. TIME.

Tomorrow, and tomorrow, and tomorrow,
 Creeps in this petty pace from day to day,
 To the last syllable of recorded time.--*Shakespeare.*

This organ is situated between Eventuality and Tunc, and is intimately related to them both. It is the source of participles, and the tenses of verbs in grammar; combined with Number, it is the foundation of the talent for chronology; time in music, dancing, and marching are also dependent upon it; and those who, like Moore, write melodies that are easily adapted to music, must have it well developed. Memory relates to past time, and each organ of Intellect has a memory of its own; but if this organ be small, although events may be fresh in the mind, they cannot be called up in the succession and order of time in which they passed.

Dr. A. D. Smith, one of the Justices of Cleveland, Ohio, and formerly a lecturer on phrenology, is the most remarkable instance that I have ever seen in illustration of this or-

gan. When I first met him, he requested me to see if I could discover any thing peculiar in his forehead; at the same time stating that in one particular he was singular. After examining attentively, I remarked that the organ of time was depressed, but tune was large; he then stated that he was exceedingly fond of tune, and had a quick perception of discord, but could not keep time; and that he possessed this peculiarity in a greater degree than any other person whom he had ever seen.

Animals evidently have perceptions of the lapse of time—they observe the time of feeding, sleeping, migrating, building their nests, and acquiring food for winter; birds, in singing, keep the most perfect time; and horses and dogs have been taught to dance. Many of the operations of nature take place in regular and measured time; even the operations of the mind are limited in regard to time, by the operations of the body. The more active the temperament of the individual, the less time he takes to perform a mental operation. Darwin states truly, that “the time taken to perform an idea, is much the same as the time taken to perform a muscular action;” and any one who will try the experiment, will find that he cannot think, in a reasonable and consistent manner, faster than he can speak his thoughts. I have lately made some experiments and observations, which result in the conclusion, that the *accent* of speech and music is related, in point of time, to the pulsation of the heart; and the *pauses* to the movement of the lungs. It is therefore probable, that the action of the brain is synchronous (equal in time) with the action of the heart and the organs of speech.

13. TUNE.

“The breeze warbles, and the mute still air
Is music slumbering on her instrument.”—*Coleridge*.

This is the perception of the *pitch* of sound, and the fundamental element of music. Music, like painting and poetry, is a complicated and compound subject, and its philosophy is not so obvious as is commonly supposed. The scientific and natural performance of music, involves almost every organ in the brain. It is common for phrenologists to attempt to judge of the amount of musical talent, by reference to the organ of Tune alone; but if my definition of the faculty is correct, they commit an error analogous to that of Dr. Gall, who, when he first discovered the organ of Color, described it as the organ of the talent for painting. Now, although the perception of color is simple, and natural, the art of painting is very difficult, and calls into action all the powers of the mind. Without Tune, no person can be a musician; but with it very large, he may yet be incapable of becoming a performer; for Tune is merely the perception of the pitch of sounds—it enables us to judge of their concord or discord—it is related to the seven primary sounds of the musical scale, just as the organ of Color is related to the seven primary colors of the prismatic spectrum.

In music, besides Tune and Time, the organ of Weight is necessary to judge of the force of sound, particularly in instrumental music—Language and Imitativeness are necessary, to give just expression—Eventuality to perceive the different kinds of action represented by the music—and, if any of the propensities are expressed, it will be also necessary that the corresponding organs be large in the head of

the performer, in order to enable him to do justice to that kind of expression—

Each passion of the soul has a music of its own,
That thrills in happy unison with its congenial tone.

Destructiveness is roused by rough, and Combativeness by loud and sudden sounds; while Adhesiveness, Parentiveness and Kindness are pleased with soft, gentle and sweet tones. It is, consequently, not difficult to judge by examination what kind of music is most pleasing to any particular form of head; and it is obvious, that although Tune may be small, yet music will please if it expresses, in a natural manner the predominant emotions.

It is undoubtedly upon this principle, that music affects some animals, as the horse and the elephant, that upon military parade, seem to partake of the feelings of their master.

We can now understand the meaning of Shakespeare's celebrated passage—

The man that has no music in himself,
Nor is not moved by concord of sweet sounds,
Is fit for treasons, stratagems, and spoils;
The motions of his spirit are dull as night,
And his affections dark as Erebus:
Let no such man be trusted.

The poet certainly did not mean to be understood as censuring those who cannot judge with accuracy of musical performances, but he who is not *moved* by concord of *sweet* sounds, his *social* affections are dark as Erebus, and his lower Ipsicals predominate.

Beattie expresses the same idea, when describing

“A heart that music cannot melt,”

and in whom Alimentiveness, Secretiveness, and Acquisitiveness predominate; he says,

“He need not woo the Muse; he is her scorn,
The sophist's rope of cob-web he shall twine,
Mope o'er the schoolman's peevish page; or mourn
And delve for life in Mammon's dirty mine;
Sneak with the scoundrel fox, or grunt with glutton swine.”

Those who have a military disposition, will be fond of martial music; and those who have a gentle, and effeminate organization, will be pleased with gentle and soothing tones, and they will be likely to say with Scott—

I hate the drum's discordant sound,
Parading round and round and round;
To *me* it talks of ravaged plains,
And burning towns, and ruined swains,
And mangled limbs, and dying groans,
And widow's tears, and orphan's moans,
And all that misery's hand bestows,
To fill the catalogue of human woes.

UPPER RANGE, OR REFLECTIVES.

14. COMPARISON.

“Look here on this picture, and on this.”—*Shakespeare.*

Almost every object or subject which can occupy the mind, belongs to a class to which it bears more or less analogy; and it is the function of this faculty to compare all our perceptions together, and perceive their resemblances and differences, and the classification to which they belong. It harmonizes all our perceptions, and perceives the agreement among them. If a new object is presented to us, Comparison immediately compares all that we know concerning it, to every thing else within our recollection, in order to know to what class it belongs; for instance, if a new phrenological organ is discovered in the brain, this faculty would compare it with the organs already known, and discover whether it belongs to the Ipseal, Social, or Intellectual Class.

If all the perceptives below Comparison be large, and this organ is also large, the individual will possess great power of discrimination; will be capable of making nice distinctions, or conceiving striking contrasts. When he is explaining any difficult subject, he will illustrate it by comparison; he will discover analogies between things which to the common observer, appear totally dissimilar; his language will abound with figures of speech, brought together from all quarters of the explored universe; from the heathen mythology, the history of individuals, of nations, of animals, and vegetables—science, literature and the arts—every thing under the sun, will be pressed into his service to adorn, amplify, or illustrate his productions.

The talent of public speaking is very dependent upon this faculty; after a plain and simple statement of the case has been made, many speakers find a great difficulty in dwelling longer upon the subject; even though Language may be large, they find it difficult to continue their remarks, from a want of interesting matter which is related to the question; let now a speaker with large Comparison rise, and he immediately begins to present the subject in a new light, and to refer to analogous cases; or if he knows no such cases, he supposes some to suit his purpose; and if he is artful, he will suppose cases in which the audience feel a deep interest, thus enlisting their feelings warmly upon a subject which before was a matter of indifference to them.

Thus Mitford's Rienzi, after having related to his countrymen the death of his innocent and lovely brother, murdered by the tyrants, he suddenly turns and applies the case to themselves, and concludes by contrasting their present condition with their former glory:

Have ye brave sons? look in the next fierce brawl
To see them die. Have ye fair daughters? Look
To see them live, torn from your arms, distained,

Dishonored; and, if ye dare call for justice,
 Be answered by the lash. Yet this is Rome,
 That sat on her seven hills, and from her throne
 Of beauty, ruled the world.

15. CAUSALITY.

“Observe how system into system runs.”—*Pope*.

Causality is the perception of dependence and connection. Every thing in existence is more or less intimately related to every other thing; but when the relation of one thing to another is such that it always must precede it, it is said to be its *cause*; and that which is thus preceded is called an *effect*; this effect may in its turn become a cause, and produce another effect, and so on to infinity, constituting a chain of causes and effects, which is called a *concatenation*. That cause which immediately precedes an effect, is called the *immediate cause*, and all the other links in the chain of causation are *remote causes*. So also those effects which are immediately followed by a cause, are called *immediate effects*, and all others are *remote effects*; now it is the function of the faculty of Causality to perceive the relation among phenomena which constitutes cause and effect.

It perceives the dependence of one *thing* upon another, of one *event* upon another, or of one phenomena of any kind upon some other. Thus, it perceives the dependence of the rivers upon their tributary streams—the dependence of the streams upon the springs—of the springs upon the rains—of the rains upon the clouds—of the clouds upon evaporation—of evaporation upon heat—of heat upon the sun, and the dependence of all these phenomena upon the laws of gravitation.

The organ of Time is just under Causality, and enables it to perceive the dependence of events upon time; thus the falling of the rain, must happen prior to the overflowing of the spring, and the swelling of the streams afterwards. The son cannot be as old as his father; the cause must come before the effect.

The historian Gibbon, has this combination of Eventuality, Time, and Causality; and his admirable history of the decline and fall of the Roman empire, is not merely a succession of stories, but a philosophical account of the dependence of one remarkable event, upon a succession of previous events, which took place in a regular order of time; and although some of them were trivial in themselves, they assume great importance, on account of their being the remote causes of an event which is in the highest degree astonishing.

Causality may perceive the dependence of one thing upon another, without regard to time. It perceives the dependence of known things and facts upon those that are unknown—thus, Columbus perceived the dependence of one side of the earth which was known, upon the other, which was unknown. Cuvier perceived the dependence of the forms of animal's bones, upon their dispositions and habits; and thus was enabled to ascertain the nature of the unknown animal by inspecting the fossil remains of a single bone.—Gall discovered the dependence of certain powers of mind upon certain portions of the brain.

Causality perceives that many strange phenomena which superstitious minds have ascribed to supernatural powers, depend upon natural causes.

In mathematics, a certain number or quantity being known, this faculty perceives the necessary existence of other numbers or quantities. Combined with Comparison and Observation, it invents and originates improvements in the arts. We observe the operations of nature, and discover

the causes upon which they depend—we observe the operations of art, and compare them with those of nature, and by adopting the natural process we improve the effect.

Sir H. Davy's safety lamp, originated in his observing that a metallic net prevented the passage of flame by cooling it, while it allowed the passage of light; observing also, that in coal mines fatal explosions were frequently caused by the flame of the lamps communicating with the gas, his Comparison perceived the analogy between the two cases, and his Causality enabled him to remove the cause of the explosion, while he retained the cause of light, by constructing a lamp surrounded with fine metallic net work.

All useful inventions must originate in observation; but it is necessary to compare the facts which have been observed, and also perceive their connection and dependences. The knowledge of facts alone, would not distinguish man from other animals; and on the other hand, however profound the reflections, they are useless unless based upon correct observations. I have seen many visionary characters who were continually dreaming of improvements, and who really seemed to manifest much originality of mind, but yet could never bring any of their plans into successful operation; the reason is, they were deficient in that practical talent which depends on the lower range of percepts; had these organs been large, they would have been able to perceive the practical facts necessary to the execution of their plans; or else to discover some facts which rendered them impracticable. The dependence of the upper organs upon the lower, and the great importance of attending to the proportions which the different parts of the forehead bear to each other, cannot be too much insisted on; but it needs no further explanation in this place.

It is common for those who have but a moderate degree of Causality, to think that there must be some mistake in

their case; because, they will tell you, they are habitually inquiring into the causes of every thing.—I reply, so do children, so do all except idiots; but it does not follow that Causality must be large. The difference between a large Causality and a small one, is, that the latter is satisfied with knowing *immediate* causes, but the former traces out *remote* causes—the large organ delights in tracing a *long* chain of causes and effects, and perceiving the connection and dependence of a great number of links,—the small organ only delights in tracing a few links, and can easily comprehend their connection and dependence; but they are satisfied with this, and do not voluntarily and habitually proceed further. If circumstances compel them to urge their Causality to its utmost, it soon becomes an irksome task; and if thrown into competition with a large Causality, they are easily overpowered.

We sometimes see the apparent anomaly of a person with moderate Causality, excelling in argument others with the organ large; but the explanation will be found in the fact that although Causality was inferior, some other advantages more than compensated, and thus rendered them superior. These principles will apply to all the other Intellectuals with equal force; for instance, if Number is small, the individual can count well enough for ordinary purposes, but he cannot compete with another who has the organ very large. And the same is true of the sense of sight; those who are short sighted, can see well enough within a limited sphere, but cannot compare with those whose vision is perfect.

Causality is large in Newton, Franklin, Clinton, Bacon, Socrates, Webster, Van Buren, Calhoun, and indeed in all those master minds that have been remarkable for their depth and originality.

GENERAL ATTRIBUTES OF THE INTELLECTUALS.

TALENTS.—If one of the lower or middle ranges of percepts are very large, and all the rest of the Intellectuals are fairly developed, a *particular* talent will be manifested. If all the Intellectual Class is very large, then *universal* talent will be possessed.

When all the other Intellectuals are medium, then very large

Individuality produces a talent for general observation.

Chemicality, for catering.

Language, for philology.

Form, for drawing.

Size, for perspective.

Weight, for engineering.

Color, for painting,

Order, for arrangement.

Number, for computation.

Direction, for navigation.

Eventuality, for history.

Time, for chronology.

Tune, for music.

Comparison, for analysis.

Causality, for originality.

I repeat it, no talent is produced by a *single* organ, unless it is well sustained by others, particularly by Individuality, Comparison, and Causality. These three are the most important organs of the Intellect; whoever is *very deficient* in either of these, cannot rise to eminence in any pro-

fession, whatever other advantages he may possess. In practical life, a deficiency of Causality, is of much consequence,—a deficiency in Comparison produces a still more serious effect; but a deficiency of Individuality is wholly fatal to practical success—and a deficiency of all three produces general intellectual weakness. These three are the *general* Intellectuals—they apply to every subject; if they are all very small, idiocy is inevitable; and if very large, even if all the other Intellectuals are less than medium, great *general* talent will be manifested.

If these three organs are large, and Form and Color *very* large, a man will be a genius in painting, provided all the other parts of his constitution are fairly developed; or if Order and Number are very large he will be an excellent accountant—if Language, a linguist—if Weight, an engineer—if Direction, Size, and Number, a mathematician—if Form, Size, Weight and Order, a sculptor—if Chemicality, a caterer—if Eventuality and Time, a historian, &c.

But it will be asked, does talent depend altogether upon the Intellectuals? do not the Propensities produce talents? I answer that they only produce the *manifestations* of talent by directing the Intellectuals to some particular subject that is calculated to gratify the propensities. Constructiveness, for instance, when large, is the source of great pleasure to the mechanic, and prompts him to *use* his Weight, Form, &c. in mechanical operations. If Approbateness is also large, and fame is in his reach, this will combine with his Constructiveness and induce him to exert his talents still more vigorously; and Perfectiveness, if large, will make him delight in perfecting his performances; but all these motives will be vain if the Intellectuals are very small—he may task his powers to their utmost, but he cannot excel—he might as well

“Call spirits from the vasty deep.”

and expect them to rise at his command; but let the propensities be powerful, and the Intellectuals large and vigorous, and he will manifest extraordinary talents whenever circumstances call them into action.

MEMORY.—Each of the Intellectuals has a memory peculiar to itself.

Individuality bestows a memory of things in general, without reference to their qualities and relations—such as houses, towns, mountains, &c., but it always acts in combination with some of the other organs of the intellect.

Chemicality, gives a memory of odours and savours.

Language, of words and other signs.

Form, of forms, features, &c.

Size, of distance and size.

Weight, of force, momentum, weight, and strength.

Color, of complexions and shades of color.

Order, of the arrangement of things.

Number, of the number of things.

Direction, of direction, or points of the compass.

Eventuality, of the history, or action of things, of stories, anecdotes, &c.

Time, of the duration of time in history and music.

Tune, of tunes.

Comparison, of resemblances, differences, analogies and classes of things.

Causality, of the origin, cause, or connection of things and events.

Large Individuality, Comparison and Causality combined, enable persons to remember the *general meaning* of what they see, or hear, although they may forget the words, time, place, and many minute details and circumstances.

Large Eventuality, Comparison, and Language, give a memory of classical literature.

Large Individuality, Size, and Direction, give a memory of places and positions.

The remarks which I made concerning the effects of the propensities in producing talents, are equally applicable to memory; thus, large Acquisitiveness will cause the intellect to remember the circumstances and amount of a debt; Approbativeness will cause Language to remember the words of praise or censure; and Alimentiveness will cause Chemically to remember the flavor of a favorite dish; but this effect is produced by the propensities calling the attention to the subject; memory is produced only by the Intellectuals, but the subject remembered depends upon the propensities.

The reason why some persons have a memory of one class of ideas and not of another is obvious, since the power of memory is in proportion to the size of the Intellectual organ upon which the memory depends. I have seen many instances of parents being vain of the talents of their children, because a great memory of *words* was manifested; and in other instances I have seen them despairing of success in the education of children who really possessed excellent talents, but were deficient only in Language, or Eventuality; but the principles just explained, will serve to correct these errors.

IMPRESSION—Is an effect produced upon the senses, and conveyed to the intellect.

PERCEPTION—Is the act of the intellect which is excited by an impression, and immediately follows it. There are as many kinds of perception as of Intellectual organs.

CONCEPTION—Is the intellectual operation which succeeds perception, and consists in combining perceptions with previously acquired ideas, and producing new ideas by combination.

IMAGINATION—Is rapid conception; it is most frequently applied to those new combinations of ideas which are unnatural and improbable.

Imagination is much modified by temperament, by excitement, and by disease; the more active the temperament, the more vivid will be the imagination. Some persons are too lymphatic to have much imagination; their perceptions remain in their minds, or are repeated continually, without combining sufficiently to constitute new ideas. "Some indolent people," says Darwin, "hum the same tune, or repeat the same verses for hours together," thus—

Onward he trudged, not knowing what he sought,
And whistled as he went, for want of thought.

A nervous, or sanguine-nervous temperament, is most favorable to imagination. Poets generally have such a temperament; and Shakespeare's description is true to nature, when he says,

The lunatic, the lover, and the poet,
Are of imagination all compact.
One sees more devils than vast hell can hold,
That is the madman: the lover all as frantic,
Sees Helen's beauty in a brow of Egypt:
The poet's eye in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to heaven,
And as imagination bodies forth
The form of things unknown, the poet's pen
Turns them to shapes, and gives to airy nothings,
A local habitation and a name.

Ideas of *perception* are always true to reality, except in cases of disease, or illusion of the senses; but ideas of *conception* and *imagination* being combinations of the perceptions, may be unnatural and unreal, and then are commonly said to be "creations of the brain," "the effects of a fertile imagination."

Thus the Sphinx of the ancient Greeks, a monster which had the head and breast of a woman, the body of a dog, the

tail of a serpent, the wings of a bird, the paws of a lion, and a human voice, is a conception produced by an unnatural combination of several perceptions of natural objects. The same is true of Milton's conception of Sin, that

“ Seemed woman to the waist, and fair,
But ended foul in many a scaly fold,
Voluminous and vast, a serpent armed
With mortal sting; about her middle round
A cry of hell-hounds, never ceasing, barked
With wide Cerberean mouths full loud, and rung
A hideous peal.”

But however unnatural the combinations, they never in health, disprove or contradict the perceptions; and no man by force of imagination, can persuade himself that vinegar is sweet, or

“ Hold fire in his hand,
By thinking on the frosty Caucasus;
Or cloy the hungry edge of appetite
By bare imagination of a feast;
Or wallow naked in December's snow
By thinking on fantastic summer's heat.”

When a well formed and philosophical intellect is excited by an imaginative temperament, the conceptions will be in agreement with the rules of propriety and the laws of nature; and it was doubtless in this sense that De Alembert spoke of the necessity of imagination to a mathematician. Professor Mitchell, of the Wesleyan Academy, Mass., informed me that it was common for him to retire to bed with an unsolved problem in his mind, and during the night to call up before his mind's eye, (his Form, Size, Direction, and Order,) all the figures on the black board, and then in imagination combine them anew again and again until he at last arrived at a correct result; and in one instance he fell asleep while thus engaged, and actually *dreamed out* a solution to a problem that he had previously failed to solve when awake.

ASSOCIATION—Is that law of the mind by which, if one idea is excited, it is followed or accompanied with other ideas. Darwin remarks: “All the fibrous motions, whether muscular or sensual, which are frequently brought into action together, either in combined tribes or successive trains, become so connected by habit, that when one of them is reproduced, the others have a tendency to succeed or accompany it; thus, the taste of a pine apple recalls the color and shape, although we eat it blind-folded: we can scarcely think of solidity without figure. In learning to fence, or perform any mechanical operation, or in learning any kind of science, we acquire a habit of using certain fibres in association at the same time.”

The same principle which accounts for the association of the bodily organs, will undoubtedly apply to the organs of the mind. If several organs have been in the habit of acting together, they become so associated that when one is excited to action the others involuntarily unite with it; this is much more likely to be the case, if the organs are contiguous to each other. It is therefore not difficult to understand how the action of the organ of Weight should be naturally associated with Form and Color, so that we can scarcely have an idea of solidity without figure and color. It is also a stated maxim in Phrenology, that the largest organs are habitually active in combination; so that when one is excited the others are apt to associate in action with it. It is upon this principle that artificial associations are formed, and the science of mnemonics, or artificial memory, is based;—by associating new and unexpected ideas with certain familiar objects, so that by calling up an object, the idea comes up by being associated with it. But this kind of artificial memory can only be useful by being regulated upon phrenological principles, so that the ideas acquired by the small organs may be associated with the large organs.—

I know a lady who has Language small, and Form, Color, Order and Number large, and she can only remember names by calling to mind their appearance when written.

ATTENTION—Is when Individuality is directed to a particular object; but what the object shall be, depends upon the other organs; we attend to those things which are most interesting to our largest propensities. Alimentiveness for example, prompts Individuality to attend to food; Constructiveness, to mechanical structures; and Parentiveness to children.



Landlord.

M^r D.

Anacron.

Gibbon.

R. Baxter.
M. Milton.
C. Columbus.

A. Archimedes.
F. Fulton.
R. Raphael.
W^t Walt.

T. Titian.
W. Washington.
L. Lagrange.

LOCATION OF THE INTELLECTUALS.

1. **INDIVIDUALITY** gives prominence and width at the upper part of the nose, or else it is developed downward like the middle of a yoke, or both.

2. **CHEMICALITY**, gives fullness to the bones under the eye, and length from the ear to the nose. See Anacreon and the landlord, and Mr. D., plate II.

3. **LANGUAGE** crowds the eye outward and downward, causing a bagging appearance under the eye, as in Milton, Voltaire, and Horn Tooke. When Chemicality is large Language sometimes appears smaller than it really is. When Language is small, the eye is sunken.

4. **FORM** contributes to give width between the eyes; it crowds the eyes towards the outer part of the socket so as to show a space between the eye and the nose. See Milton, and Raphael, and compare them with Baxter, in whom Form is deficient. All this Range is large in Archimedes.

SIZE gives width to Individuality, and makes an obtuse angle at the junction of the nose and forehead, and also makes the brow prominent at that part. See Raphael and Watt. When small, the brow will form nearly a right angle with the nose, as in Baxter.

6. **WEIGHT** gives a heavy, deep, overhanging appearance to the brow, as in Watt and Fulton. When small, the brow is shallow and almost even with the eye at this part.

7. **COLOR** gives a swelling, or arched appearance to the brow, a little outside of the middle, as in Rubens, Titian, and Hogarth; but when small the brow will be depressed or

flat. At that place there is naturally a little depression, or hollow in the bone, which must not be mistaken for small Color; the organ is a little outside of the hollow.

8. ORDER is over the external angle of the eye, at the angular protuberance of bone that is formed for the attachment of a part of the mastoid muscle; this bone is sometimes mistaken for a development of this organ and of Tune. Order is just under Tune. When both Color and Order are large, the brow will be arched. When Order is larger than either Color or Number, the brow will appear angular like that of Cuvier, or Washington.

9. NUMBER, is at the outer extremity of the brow, and when large gives fullness and length to it, as is well represented in the brow of Lagrange, the celebrated mathematician, who at the age of sixteen, was professor of mathematics. When Number and Order are both small, the brow falls off from above, and constitutes but a narrow ridge close around the eyes, and not the broad swell as in Lagrange and Colburn, and Newton, Washington and Hamilton.

10. DIRECTION OR LOCALITY, when very large, protrudes the frontal sinus forward, and gives it prominence on each side of Individuality, and just above Size, as it is seen in Columbus, Cook, A. Vespuccius, and Washington.

11. EVENTUALITY gives roundness and fullness to the centre of the forehead between Individuality and Comparison, as in Mr. D., plate II.

12. TIME continues laterally the fullness of Eventuality.

13. TUNE is just above Order, and gives width to that part of the forehead, as seen in Mozart, Weber, and Handel.

14. COMPARISON, gives prominence to the centre of the upper part of the forehead, as in Anaereon.

15. CAUSALITY gives fullness outside of Comparison, and makes the forehead wide and prominent at the upper part.

See Clinton, Socrates and Franklin. When Comparison is small, and Causality large, the upper middle of the forehead will be flat, or even depressed; and the sides, where Causality is situated, will protrude like embryo horns. When Comparison is large, and Causality small, the forehead will fall off, and be narrow at its upper part, though the centre of the forehead will be comparatively prominent.

It should be remembered, that it is the *peculiar form which the head assumes* when certain organs are large or small, that enables us to judge of their size, much more frequently than mere prominences or depressions. Sometimes the whole of a particular region of the head is large, and then we of course infer that each of the individual organs is large which go to constitute that part of the head. In other instances, one organ will be large and prominent alone, while all its adjoining organs are small; and it requires considerable practice, to know the peculiar forms and appearances which organs assume, both when single and in combination.

There are certain forms of forehead that are undeservedly popular; owing to a misunderstanding of correct phrenological principles. For instance, those who are but little acquainted with phrenology, suppose that a forehead with prominent Reflectives, always indicates a profound mind; and the writings of phrenologists are certainly calculated to lead the inexperienced into this error;—but it should be remembered, that the Reflectives are of little use when not supported by the Perceptives; and if the organs in the lower part of the forehead, (the Lower Range of Perceptives,) are deficient, particularly if the important organ of Individuality is deficient, the upper organs will lack their appropriate stimulus; and the individual, though prone to reasoning, will be frequently mistaken in his conclusions, on account of his imperfect perception and recollection of facts. Ano-

ther error is, to suppose that a *sloping* forehead indicates weakness of intellect; for the slope may be principally caused by the uncommon *prominence* of the Lower Range, and not by a deficiency of the Upper. The sloping forehead is found upon most of those men who have been successful in practical life. When however, the Lower Range is only medium, and the forehead slopes considerably, it may be justly deemed an evidence of a deficient intellect.

Another error is, to think a very high and wide forehead indicative of a great mind; for this will not prove true, unless it is equally remarkable for its *prominence forward*. The Intellectuals do not give *uncommon expansion* to the forehead, even when they are all very large; they only give fullness and length from the ear forward. The organs that give height to the forehead are 10th, 11th, and 12th, of the Social Propensities. Those that give it width, are VIII, X, and XI, of the Ipeals. These may be all very large, and the Intellectuals small, and consequently the forehead will be high and wide, but shallow; and the character will be eccentric, superstitious, fantastical and foolish.

It is not difficult for an experienced practitioner, to judge of the degree in which the expansion of a forehead is caused by the intellect, and how far it depends upon the surrounding propensities.

CHAPTER VII.

IPSEAL PROPENSITIES.

Excluding the new organs,* which I shall presently introduce, I find this Class developed in the following order:

FIRST RANGE.

Alimentiveness.
Destructiveness.
Combativeness.

THIRD RANGE.

Constructiveness.
Acquisitiveness.

SECOND RANGE.

Secretiveness.
Cautiousness.

FOURTH RANGE.

Playfulness.
Perfectiveness.
Hopefulness.

All these Propensities were evidently bestowed for the benefit of the individual, without reference to society. The first, second, and third Ranges, produce those actions only which have for their object the nourishment, and preservation of self; but the fourth Range impels man to attend to his improvement, perfection, and future happiness.

*I wish to show that this classification does not depend upon the introduction of new organs, and have therefore purposely excluded them here, and introduced them afterwards—page 122.

A knowledge of the natural history of animals, in the present improved state to which the great Cuvier has brought it, would be highly useful to phrenological students, and enable them better to appreciate this arrangement of the Ipseals; but it is sufficient for our present purpose, to state, that the more perfect animals may be divided into the Carniverous, Herbiverous, and Rodentia; on account of the different modes in which they obtain their food; and that the first, second, and third Ranges of Ipseals, exactly correspond with this division of animals. The Carniverous animals are distinguished for the manifestation of the first Range, which may therefore be denominated the Carniverous Range; the Herbiverous animals for the manifestation of the second, which may be called the Herbiverous Range; and the Rodentia for the third, which may be named the Rodentia Range. The fourth is peculiar to man, and may therefore be denominated the Human Range.

We have already seen the important relation of Individuality to the Intellectuals, and have had abundant occasion to admire the beauty and simplicity of the arrangement, by which they expand outward and upward from it, like the branches of a tree from their parent trunk; but the arrangement of the Ipseals, their mutual relation, and their dependence upon Alimentiveness, is still more remarkable.

The propensity of Alimentiveness, at the foundation of the Ipseals, is manifested by all animals, however low or high in the scale of organization; and the Carniverous, Herbiverous, and Rodentia Ranges, are in reality only so many modes of ministering to its gratification; but the Human Range is more exalted above the bodily wants of the animal, and related to intellectual and moral advancement.

These remarks will be better understood by the following arrangement:

CARNIVEROUS RANGE.

Alimentiveness.

Destructiveness.

Combativeness.

These are manifested in a powerful degree, by the animals that live entirely by the destruction of life, and are remarkable for their ferocity, such as the Tiger, Hyena, Catamount, Wolf, and all the cat and dog genus; and this range is very large in their heads.

HERBIVEROUS RANGE.

Alimentiveness.

Secretiveness.

Cautiousness.

This Range is manifested by animals that feed entirely upon vegetables, and are peaceable, timid, and gentle in their dispositions, such as the Deer, Sheep, Horse, Antelope, and Cow, and in their heads the Carnivorous Range is small, and the second Range large, particularly Cautiousness; this is obvious from the narrowness of their heads at the base, compared to those of the Carnivora, and their fullness in the upper part, at the side, where Cautiousness is situated.

RODENTIA RANGE.

Alimentiveness.

Constructiveness.

Acquisitiveness.

This Range is peculiar to the animals that build receptacles for food, and acquire bark, nuts, &c. to gnaw during the winter; and it is from this gnawing propensity that they have received the name of Rodentia, or gnawers. The most remarkable of this genus are, the Beaver, Squirrel, Ham-

ster, Rat, and Mouse. All the acquisitions of animals which they preserve for future use, are for the gratification of Alimentiveness.

HUMAN RANGE.

Playfulness.

Perfectiveness.

Hopefulness.

This Range of Ipseals is not directly dependent upon Alimentiveness, but it seems to be based upon the assumption, that the bodily wants are satisfied, and that the individual has leisure to play, and improve, and look forward for future happiness. We never spend our time in gratifying this Range, while any of the organs below are in want of *present* gratification; for example, we never think of play, or improvement, or scheming for the future, when we are very hungry, or angry, or fearful, or suffering for want of clothes, or shelter, or engaged in acquiring any thing for present use. Nourishment and preservation must receive our *first* attention, and afterwards our nobler Ipseal powers come into action, to ornament and crown the superstructure that our necessities have raised.

NEW ORGANS.

I have shown what should be the arrangement of the Ipseals, provided no other organs were discovered; but if Pneumativity, and Sanitativity are admitted, as I doubt not they will be, then another Range must be added. This will not, however, in any degree mar the beauty of the new classification, which my friends have so much admired, but will afford additional evidence of its truth, and conformity to nature. Should these two organs be rejected by other

phrenologists, and their existence or location denied, the preceding classification will yet remain unaltered; and when ever any new organs are introduced, they must be in conformity to its essential principles, though they may occasion a trifling modification of some of its details.

CORPOREAL RANGE.

Air, food, and bodily preservation, are required by every organized being; these three wants are attended to by animals in preference to all others, not only of the Social, but also of the Ipseal Class. Pneumativeness, Alimentiveness and Sanitiveness, then, must constitute a distinct range, which is wholly related to bodily wants, and may therefore be denominated the Corporeal Range.

The introduction of this Range will render it necessary, in order to give a connected and consecutive idea of the whole Ipseal Class thus modified, to recapitulate the arrangement; the first Range being now second, &c.

IPSEALS.

1. CORPOREAL RANGE.

- I. Pneumativeness.
- II. Alimentiveness.
- III. Sanitiveness.

3. HERBIVEROUS RANGE.

- VI. Secretiveness.
- VII. Cautiousness.

2. CARNIVEROUS RANGE.

- IV. Destructiveness.
- V. Combativeness.

4. RODENTIA RANGE.

- VIII. Constructiveness.
- IX. Acquisitiveness.

5. HUMAN RANGE.

- X. Playfulness.
- XI. Perfectiveness.
- XII. Hopefulness.

EFFECTS OF PROPENSITIES.

Before proceeding to explain the propensities separately, it will be necessary to show the distinction between Propensities, Feelings, and Voluntary Actions.

After much reflection, I am fully convinced, that the propensities act only through the medium of the intellect; and that to promote this end, *all the organs of the propensities terminate in the Intellectual organs*. I am supported in this opinion, both by anatomical and physiological evidence. The anatomical evidence is, that the anterior column of the Spinal Cord, (which, according to Bell, contains all the elements of voluntary motion,) proceeds from the anterior lobe of the brain; or in other words, all the nerves of voluntary motion proceed directly from the intellect, and not from the propensities, which are the original sources of voluntary motion. Now the reason of this cannot be explained, without admitting that the Intellectual organs first receive the influence of the propensities, and then transmit it to the muscles through the voluntary nerves. The physiological evidence is, that the intellect may be intensely active without rousing the propensities; but the propensities cannot be active even in a moderate degree, without rousing the intellect; and again, the propensities never produce actions without the consciousness and direction of the intellect. When one of the propensities is excited, it immediately communicates to the intellect an influence which we call a feeling or emotion; and when one feeling becomes so strong as to predominate over all others, the intellect relieves itself by transmitting to the anterior spinal column, an influence, which is conveyed to the muscles, and produces voluntary motion. The following explanations will now be understood:

PROPENSITIES, are blind impulses to action, proceeding from the Ipseal and Social organs.

FEELINGS, are effects which propensities produce in the intellect. The *strength* of a feeling will be in proportion to the size of the organ that produces it, and the degree in which it is excited.

VOLUNTARY ACTIONS, are the effects which propensities produce upon the nerves and muscles, through the medium, and by the direction of the intellect. The *force*, or strength of an action, depends upon the size of the propensity in which it originates, the degree to which the propensity is excited, and the size and vigour of the muscles. This explains why a man can strike a more forcible blow when angry, than when mild; and also, why a man with large Combativeness can strike a more powerful blow, (all other things being equal) than a man who has it small. It also explains why an insane man, in a fit of fury, when his propensities are greatly excited, often manifests a degree of muscular strength which he could not possibly equal when in health.

In explaining a propensity, we should consider,

First, its *utility*, or the design of the Creator in bestowing it.

Second, the *feelings* which it produces; and we must bear in mind, that each propensity produces a *disagreeable* feeling when it is not gratified, and an *agreeable* feeling when gratified.

Third, the *actions* which it produces; we must make a distinction between *deficient*, *proper* and *excessive* actions.

Fourth, the objects and circumstances that excite it.

Let us apply these rules to one of the propensities; for example, Alimentiveness is useful and necessary, to prompt animals to nourishment; when active and not gratified, it produces the *disagreeable feeling* of *hunger*; and when grati-

fied it produces an *agreeable* feeling of satisfaction. The *action* which Alimentiveness produces is *eating*, and this is *deficient* when bodily nourishment is neglected; it is *proper* when it is in harmony with the demands of the constitution; and it is *excessive* when it combines with Chemicality and produces gluttony and drunkenness. The circumstances that excite Alimentiveness are, either the perception of aliment, or certain irritations of the stomach.

CORPOREAL RANGE.

I. PNEUMATIVENESS.

“He breathed into his nostrils the breath of life, and man became a living soul.”—*Genesis*.

This propensity bears precisely the same relation to the lungs that Alimentiveness does to the stomach. When the lungs are not supplied with air, a disagreeable feeling of suffocation is experienced, analogous to the feeling of hunger when Alimentiveness is not gratified.

I was led to the discovery of this organ, by observing that those persons who were small in the region of Alimentiveness were generally small also in the region of the lungs, and vice versa; and in my lectures, many of my friends will remember, that I frequently mentioned this fact, acknowledging at the same time that I was unable to account for it. I also observed that persons with arterial temperaments were generally wider through the head at this part, than nervous or venous temperaments. I could readily understand that by the laws of harmony large Alimentiveness might, and probably would be accompanied with a large

abdomen, and pelvis; but this would not account for the fullness of the chest when the abdomen was small, accompanied with what I supposed was a very large Alimentiveness. While making observations upon the organ of Chemicity, I had occasion to notice the various forms which the head assumes between the nose and the ear; and I found that Alimentiveness was more active, if the head was large *immediately* before the ear, and then sloped off towards the nose, giving the face the form of a wedge: but in such cases the chest was not so full, as when the face was more square and large near the cheek or malar bones. This suggested to me the idea of a propensity related to the lungs, like Alimentiveness to the stomach; and in pursuing the investigation, I found a greater amount of evidence in corroboration than I anticipated. The important question, how far breathing may be voluntary, is not yet fully decided among physiologists; but the experiments of Le Galois prove conclusively that *respiration* is dependent upon the brain—the organ of mind—and that *circulation* is independent of the brain. To demonstrate this, he cut off the heads of animals, and respiration instantly ceased; but if he tied the blood vessels, to stop the bleeding, and then introduced air into the lungs artificially, the circulation of blood continued as usual. He next ascertained that the influence of the brain was communicated to the lungs by the means of the pneumogastric nerve, which goes from the middle column of the medulla oblongata, and sends its principal branches to the lungs and stomach; for when this nerve was separated from the lungs, the effect upon respiration was the same as when the head was cut off. He then attempted to ascertain what part of the brain influenced respiration; and came to the conclusion, that it was that part of the medulla oblongata where the pneumogastric nerve originates; because neither the injury of the brain above, nor of the spinal cord below,

interrupted respiration. My opinion is, that respiration is dependent upon both voluntary and involuntary powers; and I suspect that the involuntary power originates in the medulla oblongata, and the voluntary in the organ of Pncumativeness. This conjecture is the more plausible, as it reconciles all the facts, and explains how the *ordinary* action of the lungs may be involuntary as in sleep, while the *extraordinary* as in speaking, or smelling, are voluntary; and also, how the voluntary may at any instant predominate. Wilson Phillip contended that respiration is altogether voluntary, and uses the following language:

“ It has been customary to speak of the muscles of respiration as at least in part muscles of involuntary motion. What is meant by a muscle of voluntary motion? It is a muscle whose action under all ordinary circumstances we can excite, interrupt, retard, and accelerate at pleasure; but it is not a muscle whose action we can at all times control. There is no such muscle; because, the impression on the sensorium, tending to call any particular set of muscles into action, may be so powerful, that we are unable to control it. Who can prevent the action of the muscles of the arm when fire is suddenly applied to the fingers? Neither do we mean by the term muscle of voluntary motion, one which we cannot call into action during sleep. If our posture during sleep becomes uncomfortable, we call the muscles, both of the trunk and limbs, into action for the purpose of changing it. The uneasiness caused by the continuance of the same posture sufficiently rouses the sleeper to make him will a change of posture, without rendering him at all more sensible to other impressions of a slighter nature, and his sleep continues.

“ What muscles, then, are more under command than those of respiration? We can on all usual occasions interrupt, renew, retard, or accelerate their action at pleasure;

and if we cannot interrupt it for as long a time as that of the muscles of a limb, this depends on no peculiarity in the action of these muscles, but on the nature of the office they are called on to perform; and if we excite them in sleep for the removal of an uneasy sensation, and cannot control them under a sense of suffocation, that is, in a state of greater suffering than we can voluntarily bear, all this is no more than applies to every other muscle of voluntary motion: but, from the nature of our constitution, we must breathe many times every minute, and we need not turn ourselves more than once in many hours,—a difference depending on circumstances which have nothing to do with the nature of the muscles we employ in either of these acts.”

“The muscles of respiration, then, it would appear, are perfectly muscles of voluntary motion as those of the limbs, and are never excited but by an act of the sensorium. When there is no feeling to induce us to breathe, the breathing ceases.

“That on ordinary occasions we are unconscious of this feeling, in the common acceptation of the term, (that is, that it makes no lasting impression on the mind, for this is necessary to what we mean by consciousness,) unless the attention is particularly directed to it, is no proof that it has not existed. When we direct our attention to the act of breathing, especially if we breathe more slowly than usual, we can distinctly perceive the sensation which induces us to inspire, and that it is a voluntary act which relieves it.

“The same observations respecting consciousness apply to all the more trivial habitual acts of the sensorium. In playing on an instrument, we cannot tell which finger last struck the chord; in walking, we cannot tell which leg we last moved;—yet all such acts are strictly acts of volition: when we attend to them, we can regulate them as we please; but, in proportion as they are habitual we attend to them the

less, and therefore least of all to the act of respiration."

Sir Charles Bell, on the contrary, admits the combined operation of voluntary and involuntary powers in respiration; but at the same time acknowledges the difficulty of explaining the manner in which the mind influences the lungs. He seem to be aware that he is in contradiction with himself, when he asserts that the middle, or respiratory column of the medulla oblongata is independent of the brain, and yet that respiration is dependent upon the will. This is evident from the two following passages from "Bell on the Nerves."

"The anterior column of each lateral division of the spinal marrow is for motion; the posterior column is for sensation; and the middle one is for respiration. The two former extend up into the brain, and are dispersed or lost in it; for their functions stand related to the sensorium: but the latter stops short in the medulla oblongata, being in function independent of reason, and capable of its office independently of the brain, or when separated from it."

"These facts exhibit the importance of the spinal marrow to the act of breathing, and point to the upper part of the column, the medulla oblongata, as particularly the seat of this power. But a difficult question remains. The act of respiration in man, and in general in the higher animals, is not subservient to the circulation of blood, and to the general economy merely. The machinery of respiration becomes a grand power under the command of the will, and efficient in crying, speaking, smelling, &c. It will be difficult to determine how the power of respiration, residing in the spinal marrow, and independent of the brain in its primary and most important office, is brought to be subservient to the will. Is it by a prolongation of the appropriate column of the spinal marrow up into the brain, or is it by the junction of the cerebral and voluntary nerves with the respiratory nerves of the medulla oblongata?"

Again he says: "Under the class of respiratory motions we have to distinguish two kinds: first, the involuntary, or instinctive; secondly, those which accompany an act of volition. We are unconscious of that state of alternation of activity and rest which characterises the instinctive act of breathing in sleep; and this condition of activity of the respiratory organs we know, by experiment, is independent of the brain. But, on the other hand, we see that the act of respiration is sometimes an act of volition, intended to accomplish some other operation, as that of smelling or speaking. I apprehend that it is this compound operation of the organs of breathing which introduces a certain degree of complexity into the system of respiratory nerves. A concurrence of the nerves of distinct systems will be found necessary to actions which at first sight appear to be very simple acts of the will."

The evidence of the existence of a distinct propensity of Pneumativeness, to be derived from the natural history of animals, is of the most convincing and interesting nature. Smellie observes:

"All animals furnished with lungs, express their wants, their affections and aversions, their pleasures and pains, either by words, or by sounds peculiar to each species.—These are produced by different changes in the windpipe or canal through which the air is drawn into the lungs. The inferior animals are by this means enabled to maintain some sort of communication with others of the same species, and can, to a certain extent, convey information and express their affections and wants."

"When about to laugh, we make a very full inspiration, which is succeeded by frequent, interrupted, and sonorous expirations. When the titillation is great, whether it arises from the mind or body, these convulsive expirations sometimes interrupt the breathing to such a degree as to endan-

ger suffocation. Moderate laughing, on the contrary, produces health; by agitating the whole body, it quickens the circulation of the blood, gives an inexpressible cheerfulness to the countenance, and banishes every kind of anxiety from the mind.

“In weeping, we employ nearly the same organs as in laughing. It commences with a deep inspiration, which is succeeded by short, broken, sonorous, and disagreeable expirations.”

“By respiration and the instruments employed in the performance of it, the young of animals are enabled to extract milk from the breasts of the mother. By respiration, odors are conveyed to the nose; and coughing, sneezing, yawning, sighing, singing, and many other functions of the animal economy, are at least partly accomplished.”

“The respiration of Fishes, is carried on by means of gills or branchiæ, to which the air is applied through the medium of the water. Every portion of water contains a certain quantity of air combined or mixed in some way with it, and by this means is made capable of supporting respiration. A current of water is constantly passed over the gills by the action of the mouth, and produces the requisite change upon the blood circulating through them. This change is of the same kind with that taking place in the warm blooded animals. It arises from the influence of the oxygen in the atmospheric air; and if the water be examined, after fishes have respired it, the air it contains will be found to have undergone a similar change of composition with that breathed by quadrupeds and birds.

“When a free communication with the external air is prevented by ice, or by artifice, fishes immediately discover symptoms of uneasiness, and soon perish. *Ælian* informs us, that, in winter, when the river *Ister* was frozen, the fishes dug holes in the ice; that great numbers of fishes

resorted to these holes; and that their eagerness was so great that they allowed themselves to be seized by the hands of the fishermen. Rondeletius, made many experiments on this subject. If, says he, fishes are put into a narrow-mouthed vessel filled with water, and a communication with the air be preserved, the animals live and swim about, not for days and months only, but for several years. If the mouth of the vessel, however, be closely shut, either with the hand or any other covering, so that the passage of the air is excluded, the fishes suddenly die. Immediately after the mouth of the vessel is closed, the creatures rush tumultuously, one above another, to the top, contending which of them shall soonest receive the benefit of the air. In the shallow part of the river, when frozen, many fishes are found dead, but, when parts of a river are deep or rapid, the fishes fly from the ice, and by this means avoid destruction.

“These, and similar experiments, have been repeated by Mr. Willoughby, and many other modern authors; and they have uniformly been attended with the same event. A carp, in a large vessel full of water, was placed in the receiver of an air pump. In proportion as the air was exhausted by working the pump, the surface of the animal’s body was covered by a number of bubbles. The carp soon breathed quicker, and with more difficulty. A little after it rose to the surface in quest of air. The bubbles on its surface next disappeared; the belly, which before was swollen, suddenly collapsed; and the animal sunk to the bottom, and expired in convulsions.

“Air is distributed in the bodies of Insects by a great number of tubes or canals, called *tracheæ*, which convey it to every part. These communicate with the external air by means of openings called *stigmata*, which furnish a constant supply. That these organs are destined for the trans-

mission of air, has been proved by repeated experiments; for when stopped up by the application of oil, or other unctious substances, the animals soon lose their existence. In some insects they protrude externally to some distance from the body, and have the appearance of one, two or three tails; and in others they arise from the back and sides.

“In contemplating the parts of animals, when the uses of these parts are not apparent, we are apt to deceive ourselves by rashly supposing them to answer purposes for which they were never intended by nature. Impressed with this idea, M. de Reaumur was not satisfied with the notion of Godart and others, that the long tails of certain worms were intended to keep them steady in their motions, and prevent them from rolling. Reaumur observed, that these worms or grubs could lengthen or shorten their tails at pleasure, but that they were always longer than the animal's body. Because these tails have some resemblance to that of a rat, he distinguished the animals by the name of *rat-tailed worms*. These worms are aquatic, and never appear on dry ground till they are about to undergo their first transformation. Reaumur, in order to observe their economy more closely, obtained a number of rat-tailed worms, and put them into a glass vessel filled two inches high with water. At first they were considerably agitated, each seemingly searching for a proper place to repose. Some of them swam across, others attached themselves to the sides, and others rested at the bottom of the vessel. In a quarter of an hour they were almost entirely tranquil, and Reaumur soon discovered the real use of their long tails. Upon examining the vessel, he found that each of the animals, in whatever situation they were placed, extended its tail exactly to the surface; that, like other aquatic insects, the respiration of air was necessary to their existence; and that the tail, which is tubular, and open at the extremity, was the

organ by which this operation was performed. In this experiment, the distance from the bottom to the surface was two inches, and, of course the tails were of equal length. To discover how far the animals could extend their tails, he gradually augmented the height of the water, and the tails uniformly rose to the surface, till it was between five and six inches high. When the water was raised higher, the animals immediately quitted their stations at the bottom, and either mounted higher in the water, or fixed upon the sides of the vessel; in situations which rendered it convenient for them to reach the surface with the points of their tails.—These tails consist of two tubes, both of which are capable of extension and contraction. The first tube is always visible; but the second, which is the proper organ of respiration, is exerted only when the water is raised to a certain height. Through this tube the air is conveyed into two large tracheæ or windpipes within the body of the animal, and maintains the principle of life. When the tails are below the surface, they occasionally emit small bubbles of air, which are visible to the naked eye; and immediately are extended to the surface for fresh supplies.”

“So anxious is Nature to provide animals, in every state of their existence, with air, that, after the transformation of many insects into chrysalids, she creates instruments for that purpose, which did not exist previous to their transformation. The rat-tailed worms, formerly mentioned, soon after they are transformed into chrysalids, instead of a soft pliable skin, are covered with a hard, crustaceous substance, seemingly impervious to the air; and the tail, which was the windpipe of the animal in its first state, gradually vanishes. In a few hours, however, four hollow horns, shoot out, two from the fore, and two from the hind part of what was the head of the animal. These horns, which are hard and tubular, are discovered to be real windpipes, destined for the

introduction of air into the chrysalis, a state in which the animals have the appearance of being almost totally dead, and, of course, would seem to have little use for respiration. It is likewise discovered, that these horns, which pierced the hard exterior covering, terminate in as many tracheæ in the body of the animal. This fact affords a strong example of the necessity of air for sustaining the principle of life, even in its lowest condition. After these animals pass from the chrysalis state to that of flies, they are deprived both of their tails and horns. But Nature, in this last stage of their existence, has not left them without proper resources for the introduction of air into their bodies. Instead of protuberant tracheæ in the form of tails or horns, they now, like other flies, receive air by means of stigmata, or holes, variously disposed over different parts of the body."

"Land-snails, at the approach of winter, bury themselves in the earth, or retire into the holes of rocks, or of old buildings, where they remain in a torpid state during the severity of the season. For protection and warmth, these animals, when they go into their winter habitations, form by means of a slime that issues from every pore in their bodies, a membranous cover, which stops up the mouths of their shells. But this pallice or cover, though apparently pretty hard and solid, is so thin and porous as not entirely to exclude the entrance of air, without which the principle of life could not be continued. Accordingly, when by accident the pallice is made too thick, and prevents a communication with the external air, the animal, to remedy the evil, makes a small aperture in its cover. In this state snails remain six or seven months, without food or motion, till the general warmth of the spring breaks their slumbers, and calls forth their active powers. Hence it would appear, that air is more immediately necessary to the preservation of animal life than food itself; for, in numberless instances,

animals can live, not for days or weeks, but for months, without supplies of nourishment. None of them, however, are capable of existing nearly so long without having some communication with the air.

“With regard to the snails that live in fresh water, or in the ocean, the species of which are numerous, their manner of respiring is singular. All of them have an aperture on the right side of the neck, through which they respire. They are frequently observed to straighten the orifice of this aperture, to stretch it out in the form of an oblong tube, and, in this state, they rise to the surface, in order to expel the former air, and take in a new supply.

“But, though air seems to be an indispensable principle of animal life, yet many animals can live longer without the use of this element, or at least with smaller quantities of it, than others. Those animals which lie torpid during the winter, as the hedgehog, the dormouse, the marmot, &c., though perhaps not entirely deprived of all communication with the air, exist with only an occasional and interrupted respiration till the heat of the spring restores their wonted powers of life, when a full respiration becomes again equally necessary as before their torpor commenced.”

“The presence of air is as necessary to the life of plants as to that of animals. They have a respiration carried on by means of their leaves, which consumes in the same way the oxygen of the atmosphere, and exhales, instead of it, carbonic acid.

“When placed in an exhausted receiver, the air contained in every part of their substance, is soon extracted; and, in proportion as this air is likewise pumped out by the machine, the flowers and leaves show evident symptoms of debility; they become flaccid, pendulous, and assume a sickly appearance; and, if retained in that situation a certain length of time, their vegetating powers are irrecoverably extinguished.

“Upon the whole, as the air we continually breathe is liable to be impregnated with exhalations from every substance to which it has access, the great importance of attention to its purity, is an obvious reflection. In building towns or houses, the situation in regard to air, is a capital object. The vicinity of marshes, of stagnating waters, of manufactures of tallow, oil, sal-ammoniac, the smelting or corroding of metals of every kind, and many other operations which contaminate the air, should be either avoided or removed, as they are the pests of our senses, and the poisoners of our constitutions. Even in northern climates, houses surrounded with trees, or in the neighborhood of luxuriant vegetables, are always damp, and infected with insects; and hence the ambient air is replete with the seeds of disease. Precautions of this kind are still more necessary in hot climates. Air absorbs a greater or less proportion of the particles of bodies, according to its degree of heat. In Madrid, however, in Constantinople, and in many other cities of warm regions, the houses are crowded together, the streets are narrow, and covered with filth of every kind. We cannot, therefore, be surprised, that human beings, existing in such situations, should be so frequently infected with pestilential diseases.”

Dr. Hoppe of Copenhagen, was the first to show that the part situated before the ear, was related to food; he thought it bestowed on those who had it large, an exquisite taste, and an inclination to indulge intemperately; but Dr. Spurzheim, with great propriety, made a distinction between the propensity to eat, and the perception of the quality of food; and named the part which Dr. Hoppe discovered, Alimentiveness. If I am correct in regard to Pneumativeness, the convolutions before the ear must be divided, and what has been considered the front and lower part of Alimentiveness, is the organ of Pneumativeness.

I have already shown that there is an organ of Chemicality, the office of which is to judge of the qualities of air and food, and which is therefore, intimately related both to Pneumativeness and Alimentiveness; and accordingly we find it situated so as to come into immediate contact with the organs of both these propensities. (See plate, base of the brain.) The organ of Language also, is adjoining Pneumativeness; and this is in agreement with the relation which exists between the lungs and the powers of expression. Sir Charles Bell has demonstrated that the nerves of Respiration are the organs of expression, "from the smile upon the infant cheek, to the last agony of life." He says, "those are not the organs of breathing merely, but of natural and articulate language. I shall refer to this subject again when speaking of Natural Language.

Pneumativeness is generally small on those who are contented to follow sedentary employments, and are indifferent to the muscular exercises which give action to the lungs, but it is large on those who are remarkably fond of hunting and riding, horses and dogs, and all those circumstances which excite the respiratory system. I find that some persons have been in the habit of sleeping with their heads covered, particularly when young; while others never could endure the thought, but insist upon having their dormitories thoroughly ventilated; and some always sleep with the windows of their rooms open so that they can inhale the pure air freely. Whenever I enter a crowded assembly, I find that those who manifest the greatest degree of uneasiness on account of the state of the air, have large Pneumativeness. I find it generally large on our Indians, and this agrees with their proverbial fondness for muscular exercise, hunting, running &c., and their aversion to sedentary employments. It is larger in the people of Great Britain than in the natives of Italy; and in the inhabitants of the north-

ern, than the southern parts of the United States. It generally characterizes those who are remarkable for their restlessness, and bodily industry; it is smaller on persons of nervous and delicate constitutions, and on children who are difficult to raise on account of their puny, unhealthy habits.

II. ALIMENTIVENESS.

“Give us this day our daily bread.”

This is the propensity to take food and drink. The new born infant, the most helpless of all creatures, without any previous teaching, makes the requisite exertions to obtain aliment; and it is evidently impelled to do so by a power inherent in its nature. This propensity is absolutely necessary to animals, even in the first hours of existence; and they manifest it then in as much perfection as they do after years of experience. Many instances are on record in which this propensity has been diseased, while the others were in health. Plutarch relates that Brutus, after the death of Cæsar, when advancing to the attack of a city, was seized with such an irresistible desire to eat, that he was obliged to halt three days to recover. Medical books contain numerous reports of cases, which establish beyond all doubt the existence of this propensity, and all authors now agree in referring it to the brain. Dr. Andrew Combe, physician to the King of Belgium, in his admirable work on the Physiology of Digestion, makes the following appropriate remarks:

“The sensation of hunger is commonly referred to the stomach, and that of thirst to the upper part of the throat

and back of the mouth; and correctly enough to this extent, that a certain condition of the stomach and throat tends to produce them. But, in reality, the sensations themselves, like all other mental affections and emotions, have their seat in the brain, to which a sense of the condition of the stomach is conveyed through the medium of the nerves. In this respect, Appetite resembles the senses of Seeing, Hearing, and Feeling; and no greater difficulty attends the explanation of the one than of the others. Thus, the cause which excites the sensation of color, is certain rays of light striking upon the nerve of the eye; and the cause which excites the perception of sound, is the atmospherical vibrations striking upon the nerve of the ear; but the sensations themselves take place in the brain, to which, as the organ of the mind, the respective impressions are conveyed. In like manner, the cause which excites appetite is an impression made on the nerves of the stomach; but the feeling itself is experienced in the brain, to which that impression is conveyed. Accordingly, just as in health no sound is ever heard except when the external vibrating atmosphere has actually impressed the ear, and no color is perceived unless an object be presented to the eye,—so is appetite never felt, except where, from want of food, the stomach is in that state which forms the proper stimulus to its nerves, and where the communication between it and the brain is left free and unobstructed.

“ But as in certain morbid states of the brain and nerves, voices and sounds are heard, or colors and objects are seen, when no external cause is present to act upon the ear or eye,—so, in disease, a craving is often felt when no real want of food exists, and where, consequently, indulgence in eating can be productive of nothing but mischief. Such an aberration is common in nervous and mental diseases, and not unfrequently adds greatly to their severity and ob-

stinacy. In indolent, unemployed persons, who spend their days in meditating on their own feelings, this craving is very common, and from being regarded and indulged as if it were healthy appetite, is productive of many dyspeptic affections.*

“If the correctness of the preceding explanation of the sensation of hunger be thought to stand in need of confirmation, I would refer to the very conclusive experiments by Brachet of Lyons, as setting the question entirely at rest. Brachet starved a dog for twenty-four hours, till it became ravenously hungry, after which he divided the nerves which convey to the brain a sense of the condition of the stomach. He then placed food within its reach, but the animal, which a moment before was impatient to be fed, went and lay quietly down, as if hunger had never been experienced.—When meat was brought close to it, it began to eat; and, apparently from having no longer any consciousness of the state of its stomach—whether it was full or empty—it continued to eat till both it and the gullet were inordinately distended. In this, however, the dog was evidently impelled solely by the *gratification of the sense of taste*; for on removing the food at the beginning of the experiment to the distance of even a few inches, it looked on with indifference, and made no attempt either to follow the dish or to prevent its removal.

“Precisely similar results ensued when the nervous communication between the stomach and brain was arrested by the administration of narcotics.”

“These results demonstrate, beyond the possibility of doubt, the necessity of a free nervous communication between the stomach and brain, for enabling us to experience the sensation of hunger. The connexion between the two organs is, indeed, more widely recognized in practice than

*Dyspepsia (from the Greek words *dys*, bad, and *pepto*, I concoct) is synonymous with indigestion.

it is in theory; for it is a very common custom with the Turks to use opium for abating the pangs of hunger when food is not to be had, and sailors habitually use tobacco for the same purpose. Both substances act exclusively on the nervous system.

“The relation thus shown to subsist between the stomach and the brain, enables us, in some measure, to understand the influence which mental emotion and earnest intellectual occupation exert over the appetite. A man in perfect health, sitting down to table with an excellent appetite, receives a letter announcing an unexpected calamity, and instantly turns away with loathing from the food which, a moment before, he was prepared to eat with relish; while another, who, under the fear of some misfortune, comes to table indifferent about food, will eat with great zest on his “mind being relieved,” as the phrase goes, by the receipt of pleasing intelligence. In such cases, no one will imagine that the calamity destroys the appetite otherwise than through the medium of the brain. Sometimes the feeling of loathing and disgust is so intense, as not only to destroy appetite, but to induce sickness and vomiting,—a result which depends so closely on the state of the brain, that it is often induced even by mechanical injuries of that organ.

“The analogy between the external senses and the appetite is, in various respects, very close. If we are apt in study, or intent on any scheme, we become insensible to impressions made on the ear or eye. A clock may strike, or a person enter the room, without our being aware of either event. The same is the case with appetite. If the mind is deeply engaged, the suggestions of appetite are unperceived and unattended to—as was well exemplified in the instance of Sir Isaac Newton, who, from seeing the bones of a chicken lying before him, fancied that he had already dined, whereas, in reality, he had eaten nothing for many hours. Hero-

dotus ascribes so much efficacy to mental occupation in deadening the sense of hunger, that he speaks of the inhabitants of Lydia having successfully had recourse to gaming as a partial substitute for food, during a famine of many years' continuance. In this account there is, of course, gross exaggeration; but it illustrates sufficiently well the principle under discussion."

"Appetite, it ought to be observed, may, like other sensations, be educated or trained to considerable deviations from the ordinary standard of quantity and quality—and this obviously for the purpose of enabling man to live in different climates and under different circumstances, and avoid being fixed down to one spot and to one occupation. In civilized life, however, we are accustomed to take undue advantage of this capability, by training the appetite to desire a greater quantity of food than what the wants of the system require, and stimulating its cravings by a system of cookery little in harmony with the intentions of nature. But this is evidently an abuse, and no argument whatever against the sufficiency of its *natural* indications to lead us right.

"The most common source, however, of the errors into which we are apt to fall in taking appetite as our only guide, is unquestionably the *confounding of appetite with taste*, and continuing to eat for the gratification of the latter, long after the former is satisfied. In fact, the whole science of a skillful cook is expended in producing this *willing* mistake on our part; and he is considered decidedly the best *artiste* whose dishes shall recommend themselves most irresistibly to the callous palate of the gourmand, and excite on it such a sensation as shall at least remind him of the enviable excellence of a natural appetite. If we were willing to limit the office of taste to its proper sphere, and to cease eating when appetite expressed content, indigestion would be a much rarer occurrence in civilized communities than it is observed to be.

“ Viewed, then, in its proper light, appetite is to be regarded as kindly implanted in our nature for the express end of proportioning the supply of nourishment to the wants of the system; and if ever it misleads us, the fault is not in its unfitness for its object, but in the artificial training which it receives at our own hands. When we attend to its real dictates, we eat moderately, and at such intervals of time as the previous exercise and other circumstances render necessary; and in so doing, we reap a reward in the daily enjoyment of the pleasure which attends the gratification of healthy appetite. But if we err, either by neglecting the timely warning which it gives, or by eating more than the system requires, mischief is sure to follow. In the former case, waste continues to make progress till the body becomes exhausted; and in almost exact proportion do the cravings of appetite become more and more intense, till they pass into those of uncontrollable *hunger*, which overthrows all obstacles, and seeks gratification at the risk of life itself. In the latter case, indigestion, gloomy depression, and repletion, with its concomitant evils, make their appearance, and either imbitter or cut short existence.

“ Mischief sometimes arises also from people not being sufficiently aware, that, in common with other sensations, appetite may be so far deranged by disease as to give very incorrect and unnatural indications. It often happens, for example, that a patient shivers and complains of cold, when we know by the thermometer that the heat of the skin is really above instead of below the natural standard. In like manner, in some morbid states of the nervous system, a craving is often felt which impels the patient to eat, but which is not true hunger, and here food, if taken, is digested with great difficulty. Occasionally, on the other hand, no desire for food is experienced when the system really needs it, and when it would be digested with ease if intro-

duced into the stomach. Esquirol alludes to cases of this description, and I have met with similar examples. Voisin also mentions, that, in the Hospital of Incurables in Paris, there are some idiots so low in the scale of intelligence as to make no attempt to take the food which is placed before them, although they eat and digest readily when fed by others. Sometimes, again, appetite is depraved in quality, and the patient desiderates the most nauseous and repulsive kinds of food, such as earth, chalk, coals, and excrement. There are states, too, in which the appetite is prodigiously increased, and the patient consumes incredible quantities of food,—which, however, are very imperfectly digested.—Charles Domery, for instance, when a French prisoner at Liverpool, consumed in one day, four pounds of cow's udder, and ten pounds of raw beef, with two pounds of tallow candles and five bottles of porter; and, although allowed the daily rations of ten men, he was still not satisfied. Baron Percy speaks of another man, who ate twenty-four pounds of beef in as many hours, and thought nothing of swallowing a dinner prepared for fifteen German boors. I once attended a patient who was afflicted with a similar inordinate craving, and whose only pleasure was in eating. In such cases no restraint except actual coercion is sufficient to prevent indulgence; but the craving itself is as much the product of disease as the shivering in the beginning of fever, and can no more be removed by reasoning than the sensation of cold can be removed by telling a patient that his skin is thermometrically warm. But these, being cases of disease, do not in any degree militate against the accuracy of the exposition above given of the healthy uses of appetite."

"Strong presumptive evidence has been adduced, particularly by Braichet, to show that the *pneumogastric** nerve

*From *pneumon*, a lung, and *gaster*, the stomach, or *lung and stomach* nerve.

is charged with the involuntary motions of the stomach, as well as with the sense of its condition. Food being the natural stimulus of that organ, as light is of the eye, its presence alone, without and even against the will, suffices to produce the contraction of its muscular coat; and accordingly, the more stimulating the food, the more rapid and vigorous is the muscular contraction which it excites. So far, indeed, do the stomachic nerves respond to their own stimuli, that, if nauseous or other irritant and indigestible substances be swallowed, the action of the muscular coat becomes so violent as to excite sympathetically the simultaneous contraction of the diaphragm and abdominal muscles, to aid in their immediate expulsion by vomiting; and this is the reason why such substances are in common use as emetics.

“Magendie doubts whether these movements are in any measure dependent upon nervous influence; but the fact of their being so seems to be proved by the experiments of Gemelin and Tidemann, who found them constantly produced when the pneumogastric nerve was irritated either by the scalpel or by the contact of alcohol. Brachet, also, who examined the subject with great care, obtained similar results; and the only plausible argument against their conclusiveness consists in the double function which seems thus to be assigned to a single nerve—that of conveying to the brain a sense of the state of the stomach, and that of imparting motion to its muscular fibres. Brachet, however, turns this charge into an additional proof; for, on careful dissection, it appears that the pneumogastric nerve is really a compound of two distinct sets of fibres, intimately connected, no doubt, in structure and in function, but each essentially distinct in its origin, and so far fitted for a peculiar office.

“When the pneumogastric or chief nerve of the stomach is tied or cut through, and its ends separated so as to inter-

rupt the flow of nervous energy towards that organ, digestion is either entirely arrested or greatly impaired."

"It is true that the *mode* in which the nerve acts is not yet ascertained, although the fact of its necessary co-operation is rarely disputed. As, however, the direction of a current of galvanism to the cut end of the nerve next the stomach suffices to re-establish digestion after that process has been suspended by the interruption of the nervous influence consequent on its division, we may reasonably infer that, in the healthy state, the nerve merely transmits to the stomach a stimulus or energy generated for the purpose either in the brain or in the spinal marrow and ganglia—that the nerve, in short, acts only as a conductor, and does not originate the influence which it evidently imparts. In several of Brachet's cases, indeed, as well as in those of Tidemann, the continued irritation of the cut end of the nerve proved sufficient to carry on digestion to a certain point, by affording, in another way, the necessary stimulus to the muscular contractions of the stomach: for in all these experiments, digestion was found to have advanced almost in exact proportion to the degree of admixture which had been effected of the food with the gastric juice,—an admixture now ascertained to be produced chiefly by the contractile power of the stomach itself."

"The importance of the nervous agency in effecting digestion has been denied, because we are not *conscious* of the presence of food in the stomach. But in health the want of such consciousness is a privilege and not a defect; and it has been admirably pointed out by Dr. Southwood Smith, that in possessing, as we do, the distinct consciousness of a *pleasurable* feeling in the stomach after indulging in a suitable meal, we have all that is desirable for either utility or enjoyment. If we were aware of the presence of every portion of food which the stomach contained, and of the

changes occurring in each, our attention would be so disagreeably and unprofitably taken up that we would pray to be delivered from the annoyance. Where, however, from disease or the food being inappropriate, the stomach is injured by what is eaten, consciousness then becomes painful, for the express purpose of warning us that mischief has been done, and that we must take means for its removal."

All practical Phrenologists now admit the organ of Alimentiveness, and consider it as established; indeed the amount of evidence in its favor is overwhelming. I have generally found it large in Indians, however deficient they were in other respects. I have found it, with Pneumative-ness, large in all children remarkable for their robust and healthy constitutions; those on the contrary who have it small, are more liable to the diseases common to their age, and all persons suffer more severely, and are less likely to recover from debilitating diseases when this is small. Those who are in the business of fattening stock, are aware, that long, narrow headed animals, particularly swine, are much less profitable than the wide chuckled heads. It is proper to remark, that the quantity of food eaten does not depend altogether upon Alimentiveness, but in part upon the size of the stomach; thus the carnivorous animals, that have small stomachs, though exceedingly voracious, eat a much smaller quantity than the herbivorous. I have even thought that those with large Alimentiveness eat less at once, but desire it oftener and more intensely. Neither does this propensity enable us to judge of the *quality* of food; this, as we have already seen, depends upon the intellectual faculty of *Chemicality*. I explain Alimentiveness thus;—when the body is in need of nourishment, the nerves of the stomach are disagreeably impressed; this impression is conveyed to the organ of Alimentiveness, and rouses it to action, producing the *feeling of hunger*; Alimentiveness communicates the excitement

to the Intellectual organs, particularly Individuality, Chemicality and Language; it has now complete control over the intellect, and the attention is exclusively occupied with ideas of food. If, when the mind and body are in this state, food be placed before the individual, the nerves of smell and taste immediately convey impressions to Chemicality, and this organ perceives the quality of the food—if agreeable, it is admitted into the stomach, and the nerves now convey agreeable impressions to the brain; as soon however as the stomach is filled, both agreeable and disagreeable impressions cease to proceed from the stomach to Alimentiveness, hunger is no longer felt, and the pleasure of eating is gone. The causes which excited the organ being removed, it ceases to goad the Intellectuals, and other objects and subjects are permitted to occupy the attention. When we continue to eat after hunger is appeased, merely because the food has an agreeable flavour, the excess may be attributed to Chemicality.

The effects of a very large organ of Alimentiveness will now be easily understood; the proper office being, not to judge of the quality, nor to regulate the quantity of food, but to rouse the attention to such objects and subjects as are adapted to its gratification. The abuse of Alimentiveness consists in permitting the mind to be too easily and too often excited by the stomach, and too long occupied with alimentary ideas. To gratify this feeling, and allay the irritation in the stomach, something which Chemicality approves is swallowed, but the feeling soon returns, and another portion must be swallowed to allay again the nerves of the stomach. Sometimes stimulating and narcotic substances, such as opium, alcohol, &c., are taken instead of food; but it is a law of the animal constitution with which Physiologists are all familiar, that when stimulating doses of any

kind are taken habitually, they must be increased in order to produce the same effect.

Intemperance is principally the abuse of Alimentiveness. It must be obvious to every Phrenologist, that a vice so beastly in its nature, and so degrading and shocking to the moral feelings, is related to one of the lowest propensities. As soon as we admit that intemperance is the effect of the too great influence of this organ, and that a Phrenologist can, by examination, determine a person's disposition in this respect, the subject immediately assumes great importance to the cause of temperance, and becomes deeply interesting to every philanthropist.

I find the organ larger in the heads of our American Indians than in those of any other race; the prominence of the cheek bones, which has been considered one of the peculiarities of their features, is in a great measure caused by Alimentiveness and Pneumativeness. I do not wish to be understood to assert that the prominence of these bones is altogether owing to developement of brain, but it is certain that their appearance is greatly modified by the manner in which the anterior portion of the middle lobe is developed. No trait of the Indian character is better known than their intemperance; as soon as the "fire-water" was introduced among them, they became drunkards, and were ready to sell every thing to produce the means of intoxication, for which, (to use the language of a distinguished historian*) they feel such an insatiable desire, as is not easy to conceive or describe. This is their general character, although I am aware there are some honorable exceptions. Their intemperance cannot be attributed to ignorance, for the Negroes, although equally ignorant, are not equally intemperate. It is undeniable that the Negroes in this country, are more

*Robertson.

temperate than even the whites. Will it be believed that the ignorant and half savage Negro, has more control over his appetite, than the firm and dignified Indian, or the polished white man? Neither can it be said that the difference in the two races in this respect, is owing to the difference in the general constitution; or in other words to the lymphatic temperament of the Negroes, and the arterial and venous of the Indian; for we find the Negro manifesting some of the lowest propensities in a much greater degree than the Indian. Some of the most easily besetting sins of the Negro, the red-man is rarely tempted to commit, while in regard to intemperance in drinking, no race on earth is more unfortunate than the Indian, and none less so than the Negro. I know many temperate Negroes, and I have observed that when ordinary pains are taken with them, they seldom become drunkards; but this cannot be said of the Indian; when ardent spirits are within their reach, those who continue temperate are by no means numerous.

The generality of the lower classes of the Irish have a larger developement of Alimentiveness than the same classes of other Europeans; if we compare their heads in this respect with those of the Italians, a decided difference may be remarked, and in this country, the practice of getting intoxicated is much more prevalent among them than any other foreigners. Alimentiveness is one of those organs which are comparatively smaller in the female head than the male; and the fact that women are more temperate than men, has always been admitted; but it has been explained by the difference in their circumstances. No judicious Phrenologist will overlook the influence of circumstances in producing difference of character, but when he finds it connected with a difference in the organization of the brain, he will reasonably suspect that the force of circumstances is only a secondary cause in producing the effect. The moment the intoxi-

cating draught is placed within the reach of the Indian, he seizes it, and without waiting for the influence of any other circumstances, he becomes a drunkard at once; while our females continue through their whole lives to use it judiciously. In the very few instances in which I have found our native Anglo American females notoriously intemperate, I have also invariably found an extraordinary development of Alimentiveness in their heads, and a very active temperament. Another observation which confirms these views, is, that the children of the intemperate parent follow his example when they resemble him in constitution, much more frequently than when they resemble the temperate parent. I have observed for instance, that when an intemperate man has a large family of children, some of them would resemble him in temperament, and in the configuration of their heads; while others of them would resemble their mother; and those who resembled the father, followed in his footsteps, while those who resembled the mother, much more frequently avoided the fatal practices of the father. Now, in these cases, the influence of circumstances independent of the constitution, are certainly as nearly equal as they can ever be; and therefore the difference in character must be referred to organization.

What is generally understood by intemperance, is the excessive use of alcohol. It is curious to enquire into the nature and origin of a substance which possesses such an unconquerable charm over the human mind. It is popular to speak of it as entirely artificial, because obtained by art; but this is not strictly true, since alcohol is only *separated* from sugar, by depriving it of a part of its carbon. There is no known substance besides sugar, from which alcohol can be obtained. When extracted from grain, it is by first changing the grain into sugar, by a process called sacarine fermentation, and then changing the sugar into alco-

hol, by another process called vinous fermentation; therefore, sugar may be said to be artificial, with as much propriety as alcohol. It has been found by the experiments of the most celebrated chemists, that the largest part of grain is starch; according to Sir H. Davy, 70 parts in 100 of wheat are starch. Sausure ascertained that 100 pounds of starch produced 100 pounds of sugar; and he thinks that sugar is merely starch combined with water. He also found that 100 parts of sugar was composed of 58 parts of alcohol and 36 carbonic acid; and that the manufacture of alcohol, consists in expelling from sugar the carbonic acid which it contains. These facts seem to demonstrate conclusively, that alcohol is not formed artificially, but exists in grain as one of its proximate elements; and that the process of fermentation and distillation only extract or separate it from its natural combinations. This view of the nature of alcohol, enables us to understand the source of its wonderful power over the mind, as it evidently possesses, in a concentrated form, all the adaptation to the nerves of the stomach that the sugar or grain did, from which it is derived, without being combined with other substances to prevent its too great stimulating effects. While this explanation enables us to understand the mystery of intemperance, it affords no argument in its justification; on the contrary, it shows that it is an unnatural perversion of one of the choicest blessings of life, and affords another illustration of the truth that

“There’s not a blessing heaven vouchsafes to man,
But his own folly may turn it to a curse.”

III. SANITATIVENESS.*

Infirmity doth still neglect all office
Whereunto our health is bound: we are not ourselves
When nature, being oppressed, commands the mind
To suffer with the body.—*Shakespeare.*

This is the propensity to preserve the bodily constitution from injury. When disagreeably affected, it produces the *feeling of bodily pain*; and when agreeably affected it communicates a *feeling of bodily ease*. The design of the Creator in bestowing it, is evidently to protect the organic structure of animals from the thousand injuries that “flesh is heir to.” No propensity is more universally, or more plainly manifested, and next to Pneumativeness and Alimentiveness, none is so essential to the preservation of existence. Were it not for this, animals would sacrifice their limbs and even their lives, without making an effort to save them. The lower animals do not protect their bodies from injury because they understand the importance of health and vigor; they do not by reasoning infer that wounds will endanger life, or disqualify them for the enjoyment of happiness, any more than they do that abstinence from food, or air, will be fatal; but they are endowed with this propensity, which impels them to avoid bodily injury. Just as the feeling of suffocation is the effect of Pneumativeness, when roused by the wrong condition of the lungs, and the feeling of hunger is the effect of Alimentiveness, when roused by a wrong condition of the stomach; precisely so is the feeling of bodily pain the effect of Sanitativeness, when roused by

*From the Latin *sanatas*—health, or soundness of the body.

a wrong condition of the organic structure of the body. The principal difference is, that Pneumativeness or Alimentiveness is excited only by one appropriate bodily organ; but Sanitiveness is capable of being excited by any part, however remote, or minute, whenever it may be in such a condition as to require the special attention of the mind. It is worthy of remark, that the nerves of sensation are most plentifully supplied to those parts that are most exposed to injury. The term pain, should be applied only to corporeal pain; but it has two popular significations; in its most enlarged meaning, it comprises all unpleasant sensations; thus hunger, suffocation, pity and fear, are said to be painful; but this is figurative language, which originated in the fact that the disagreeable affection of Sanitiveness is of all others the most dreadful. There is no more phrenological propriety in applying the term pain to hunger, or fear, or disappointment, than there is in applying the term hunger to a desire for knowledge. When the stomach is empty, Alimentiveness is roused, and hunger is felt—when food is taken, hunger is removed,—if too much food is taken the organic structure of the stomach becomes injured; this rouses Sanitiveness, and pain is felt until the injury is repaired. The same principle will apply to every other part of the body; whatever the functions may be, if they are performed without injury to the organization, no pain is felt, though there may be other disagreeable feelings experienced. Corporeal pain is, therefore, in every respect analogous to the disagreeable affections of the other propensities; and results from Sanitiveness just as hunger does from Alimentiveness, anger from Destructiveness, or fear from Cautiousness. It is now obvious why pain is forgotten when other more powerful feelings predominate. A wounded man seeing a robber about to escape with his property, is so attentive to ideas of Acquisitiveness, Cautiousness, and

Combativeness, that he is temporarily unconscious of his pain. The explanation of this propensity also affords an easy answer to the question so often asked, why a Creator of infinite goodness permitted the existence of pain; and it will be perceived that it is itself the strongest evidence both of wisdom and goodness. It is like the garment that an affectionate parent throws around a tender child; though it may sometimes be uncomfortable, it is kindly intended for its protection.

My attention was directed to this organ in the following manner:—I had in my lectures been in the habit of stating that those organs which are most necessary at any particular age, are most developed at that age. I also stated that the organ of Destructiveness was larger in infants than adults. To this, some of my friends objected, that there seemed to be no necessity for children to have a large Destructiveness, at a time when their weak, helpless condition rendered it impossible for them to destroy any thing. I was unable to explain this apparent inconsistency, and resorted to my usual practice of accurate observation, with the hope to find some explanation. I found that in most infants Pneumativeness, Alimentiveness, and Destructiveness were very large; and that the *under part* of Destructiveness was even so large as to cause the ears to stand out from the head. One day, at a public table, I saw a child with Destructiveness very prominent, and whenever the mother neglected to fill its mouth, nothing could exceed the rage manifested by the hungry infant; it kicked, scratched, and screamed, to the annoyance of every one in the room; refusing all consolation until its appetite was satisfied; and then all was peace and quiet—the smile mounted its features, and chased away the scowl, and the crowing laugh of joy assumed the place of the scream of rage. This led to other observations of a similar kind, which explained, in the most

satisfactory manner the necessity of Destructiveness to children, combined with Alimentiveness. This seemed to be confirmed by the fact that the organ of Alimentiveness joins Destructiveness, and the convolutions of the two organs run into each other. It was then objected, that children manifest the same degree of anger when in pain, as they do when hungry; and if the continuation of the convolution of Alimentiveness into Destructiveness proved any thing, it proved that there should also be an organ of pain, continued into it in the same manner. This suggestion seemed plausible, and induced me to look for an organ of pain, particularly in infants, from the fact that when born they manifest but three feelings, viz: suffocation, hunger, and pain. I was fully convinced that the organ must be at the base of the brain—that it is a propensity—an Ipseal—that it must join Destructiveness—that in the order of arrangement it is preceded by Pneumativeness and Alimentiveness—that it comes before Destructiveness, and is manifested by animals. According to my classification of the organs, these conclusions were inevitable. There was but one question remaining—is the organ so situated that it can be discovered by an external prominence? In examining the brain, I had always noticed a convolution under Destructiveness, and running parallel with it, which, if large must give width to the head under Destructiveness, and throw out the ears, giving prominence to the muscles on the sides of the neck, just as Amativeness does on the back of it. All my conjectures were now directed to this convolution as the organ. This harmonized with the appearance of infants' heads which I had observed. It also called to recollection many instances in which pain had been powerfully expressed by those suffering from wounds; and as near as I could remember they were large in this place. I proceeded to examine, question, and compare individuals, until I became satisfied

that my conjectures were well founded. I think the organ is smaller in women than in men, and accounts for the apparent firmness with which they endure pain; they are more apprehensive before it comes, and are more easily affected by it, but they do not suffer as intensely, nor express it as forcibly, and can bear it with more patience than man. I find, as a general rule, this organ is larger the more vigorous and robust the constitution. It is larger in the carnivorous than in the herbivorous animals. It is larger in children than in adults. It would, however, be obviously unphilosophical to name it the organ of pain; as this is only the disagreeable affection of a propensity, the proper gratification of which, yields the opposite feeling, which is denominated *bodily ease*. The proper inquiry is, what was the design of the Creator in bestowing this propensity? and this naturally brings us to the conclusion that it is the organ of Sanitativeness, or the propensity to protect and preserve the integrity of the bodily constitution, to prevent disease, and injury, and destruction. Children, and animals, ignorant of this design, make use of it instinctively, when roused by the feeling of pain, which it produces when disagreeably affected. If these views of pain are correct, the opinion of the poet, that the beetle which we tread upon,

“In corporal suffering, finds

A pang as great as when a giant dies.”

may be again revived; notwithstanding the belief of Physiologists that the pain which an animal suffers is in proportion to the number and developement of his sensitive nerves. It must be remembered that the nerves do not feel, but only convey impressions of those irritations, the consciousness of which constitutes pain; in order, therefore, to ascertain the intensity of sufferings, we must either ascertain the size of Sanitativeness, or judge by the energy with which it is manifested. The uncommon developement

of nerves, only indicate that the parts to which they are distributed, are sensible to a slight impression, but they do not indicate the intensity of feeling.

REMARKS ON THE CORPOREAL RANGE.

In examining individuals, and especially children, I always look at this range first, because so much depends upon it. Health, vigor, endurance, and even longevity are in a great measure to be accounted for by its influence. I do not assert positively that health is caused by the influence of this Range; I only state that which I do know, that the bodily constitutions of children are seldom strong and vigorous when this Range is small; they are more weak and slender, and liable to fall victims to the many changes which their constitutions must undergo in their progress from infancy to maturity. In adults also, I find health and energy of constitution much less to be depended upon when this Range is deficient. I frequently find a person with a large Corporeal Range sustaining himself in health and vigor, under circumstances which would be fatal to those who have it small; such persons are said to possess wonderful elasticity of constitution; they rise sometimes from beds of sickness, from which hope had long since fled; and they pass comparatively unscathed through the various dangers to which different ages, sexes, climates, and occupations, render them liable. In those instances in which I have found this Range moderate, accompanied with health and vigor, I have found an excellent temperament compensating for the deficiency; but I never found health and vigor when both the Corporeal Range, and the Arterial System, are less than medium. This shows the great importance of attending to tempera-

ment, when pronouncing opinions in practical Phrenology; particularly the arterial temperament. Phrenologists have not attached sufficient importance to the influence of the arterial system, upon the brain and nervous system. The following facts will show that no correct opinion can be formed without estimating the state and quantity of the arterial blood.

1st. The experiments of Le Galois, and others, prove that the brain and nerves cannot act a single moment without being impressed by the arterial blood, and

2d. On the other hand the heart cannot contract so as to send the blood to the brain, unless it is excited by the nerves; so that the arterial and nervous systems are mutually dependent upon each other.

3d. The amount of blood which the brain requires, under ordinary circumstances, is, by all authors, admitted to be not less than four times greater than any other part of equal bulk, and some estimate it nearly twice that amount.

4th. The amount of blood which the brain requires is in proportion to its size.

5th. When the brain is much excited, either by thought or passion, it requires more blood than when exercised in an ordinary manner.

6th. Those parts of the brain which are most exercised, receive more blood than those which are inactive.*

7th. Any changes which take place in the *quality* of the blood, have a greater effect upon the brain than any other part of the constitution.

8th. The quantity and quality of blood depends upon digestion, and respiration, and these depend upon Pneumativeness and Alimentiveness.

*When one of the larger organs are very much excited, the uncommon quantity of blood which it receives causes the head to feel warm externally, and thus, in some cases, becomes a guide to the practical phrenologist; in some instances this warmth is supposed to cause the hair to fall out.

These facts enable us to understand, why those persons who have a moderate Corporeal Range, do not suffer so severely when they have a good dvelopment of the arterial system, as when they are deficient in this respect. It also explains many other difficult subjects connected with phrenology. If from disease, or unwholesome air, or diet, the blood becomes reduced in quantity, or quality, it is obvious that the brain cannot be impressed by it in such a manner as to call forth all its energies. A person, therefore, who has a small brain, may, when favored with a good temperament, manifest a more powerful mind, than one who has a large brain with an unfavorable temperament.

Those occupations, or situations, or climates, or atmospheres, or diets, or habits, or constitutions, or diseases, that disqualify the blood for its office, affect the mind injuriously.

The student who has a large brain, and a very large forehead, and who spends his days and nights in *improving* his mind, while he neglects the exercise and nourishment of his body, is taking the most efficient means to undermine the very foundation of the temple which he is so ambitious to perfect and adorn.

INTERNAL SENSES.

These are the nerves that convey impressions from the internal bodily organs, to their appropriate propensities in the brain. Thus, Pneumativeness, Alimentiveness, and Sanitiveness, of the Ipseals, and Amativeness and Parentiveness, of the Socials, are each capable of being excited to the highest degree, when the bodily organs to which they are severally related, are in want of their peculiar enjoyments. The secretion of milk in the breast, irritates certain

nerves which convey the impressions to Parentiveness and rouse it to action. The secretion of the gastric juice, irritates certain nerves of the stomach which convey impressions to Alimentiveness; in the same manner every organ when irritated in a peculiar manner, communicates an impression to the brain by means of some nerve, and rouses the appropriate propensity, to relieve disagreeable sensations, or to continue agreeable ones. The nerves of the internal senses are so concealed from observation, that the most skillful anatomist cannot trace them with certainty; this accounts for the fact, that so very few, besides professional men, are acquainted even with the existence of such senses. The obscurity of this subject may be inferred from the fact that Sir Charles Bell denied that the nerves of the middle column conveyed any sensation whatever, and attempted to show by experiment, that they were all devoted to respiratory motions. But Professor Reid, of Edinburgh, has succeeded in completely overturning Bell's theory of respiration, so far as it is opposed to Phrenology, by experiments which are minutely detailed in the *Electric Journal of Medicine* of June, 1838; and which were performed in presence of Professors Allison and Sharpy, of the London University, to their entire satisfaction. The assertion, therefore, of Sir Charles Bell, that "the middle column stops short in the medulla oblongata, being in function independent of reason, and capable of its office independent of the brain," is erroneous. So far as Bell's theory is opposed to my classification, it has been disproved by the experiments of Brachet and Reid; but so far as it is in agreement, it has been universally admitted. The truth is, Sir Charles Bell committed a great error, when he adopted the notion of Willis, that the cerebellum is related to the posterior spinal column, and presides over sensation; and that the cerebrum is related to the anterior column, and presides over volition; and in order

to carry out this notion, he was obliged to make the middle column stop short in the medulla oblongata. If my views are correct, the anterior, middle and posterior divisions of the brain, medulla oblongata, and spinal cord, are related to the three Classes of mental powers, Ipseal, Social and Intellectual.

CARNIVEROUS RANGE.

IV. DESTRUCTIVENESS.

Kill and eat.—*Acts.*

In a world like this, where death is making continual havoc, so that every moment a human being falls a victim to disease or violence; and where animals are compelled by uncontrollable instinct to prey upon each other; how miserable should we be, without a certain degree of this much abused and slandered propensity. It not only bestows a disposition to break, rend, tear, wound and disorganize, but gives pleasure in the silent contemplation of destruction in which the individual takes no part, except in imagination. It enables a person to listen with composure, and even with a kind of satisfaction, to accounts of violent treatment, in which his better feelings would have prevented him from participating. When this organ was first announced, it was called the organ of murder; and a thrill of horror was excited at the very suggestion, that the Creator had bestowed upon all mankind a propensity, which characterizes tigers and murderers. Dr. Gall himself, when he first noticed the resemblance between the heads of murderers and carnivorous animals, recoiled from the conclusion to which it naturally seemed to tend; he says, “I revolted from this

idea; but when my only business was to observe, and to state the result of my observation, I acknowledged no other law than truth." It was afterwards ascertained to be the propensity of destruction in general, which, when properly governed, is absolutely necessary to the preservation of human existence, and conducive to general happiness. In carnivorous animals, its utility is obvious; since they can only obtain their appropriate food by its exercise; but some persons deny that man is, by nature, in any degree a carnivorous animal—that he thrives best upon vegetable food exclusively, and that therefore Destructiveness in him is unnecessary. But even admitting that man is not naturally carnivorous, still, Destructiveness is absolutely necessary to prevent the unhappy feelings which the sight of misery and death would otherwise occasion to benevolent minds. This is proved by the distress of some persons, particularly females, at the sight of violence, and even at its recital. The poet Cowper, gives expression to this feeling, when he says,

“ My heart is sick—
My ear is pained, with every day's report
Of wrong and outrage.”

The organization of Cowper forms a perfect contrast in this respect with that of Byron, who manifests Destructiveness in almost every one of his poems, in an extraordinary manner. His *Dream of Darkness*, could not have been conceived, except by a mind intensely imbued with this propensity. It seems as if his powerful intellect was inspired by the pure spirit of Destructiveness. His imagination soared far beyond common deeds of destruction, and revelled in the contemplation of universal devastation and death:

“ The bright sun was extinguished, and the stars
Did wander darkling in the eternal space,
Rayless, and pathless, and the icy earth
Swung blind and blackening in the moonless air.

* * * * *

A fearful hope was all the world contained:
 Forests were set on fire; but, hour by hour,
 They fell and faded, and the crackling trunks
 Extinguished with a crash, and all was black.

* * * * *

And War, which for a moment was no more,
 Did glut himself again—a meal was bought
 With blood, and each sat sullenly apart,
 Gorging himself in gloom: no love was left;
 All earth was but one thought—and that was death,
 Immediate and inglorious; and men
 Died, and their bones were tombless as their flesh.

* * * * *

The world was void;
 The populous and the powerful was a lump—
 Seasonless, herbless, treeless, manless, lifeless—
 A lump of death—a chaos of hard clay.
 The rivers, lakes, and ocean, all stood still,
 And nothing stirred within their silent depths;
 Ships, sailorless, lay rotting on the sea;
 And their masts fell down piecemeal; as they dropped,
 They slept on the abyss without a surge:
 The waves were dead; the tides were in their graves;
 The moon, their mistress, had expired before;
 The winds were withered in the stagnant air,
 And the clouds perished; Darkness had no need
 Of them; she was the universe.”

This propensity is also necessary to enable men to destroy the reptiles and beasts of prey, which would otherwise render the earth one vast den for their habitation; and mankind would become their prey until the human race was extinct.

The feeling of anger, or wrath originates in this propensity, and is, on many occasions, perfectly consistent with justice and benevolence. The acts of oppression, fraud and cruelty, which wicked men are continually perpetrating, are naturally calculated to excite the wrath of all good men; and

that they often "do well to be angry;" but when this feeling is not regulated by justice, and kindness, (eighth and tenth organs) it is denominated malice, revenge, or fury; and the acts which follow are cruel, barbarous, or brutal. The very same fundamental propensity therefore, which prompts the assassin to strike his innocent victim, also determines the ministers of law to punish him with death; but in one case the higher feelings of justice and mercy are overcome by Destructiveness, and in the other, Destructiveness is only a secondary power, acting under the sanction and control of Conscientiousness and Kindness; the object being to prevent the misery of thousands, by the punishment of a few. Should the gentler feelings entirely control the judges, under such circumstances, crimes might be committed without restraint; and the consequences of indulgence would be finally visited upon that very class of individuals, whose meekness encouraged the audacity of offenders.

Bitter, caustic, and severe language, in which is included cursing, swearing, and scolding, is referable to this propensity. Some persons, especially when weak in body, or restrained by circumstances,

"Speak daggers, but use none."

The intimate relation between the convolutions of Alimentiveness and Destructiveness, explains why those who have them both large, are often ill natured when hungry; the lion is said to be dangerous only when goaded by appetite; and most men in office are more approachable after dinner; the spirit of severity is much less active, and they are more likely to give a kind answer to petitions. Several ladies of my acquaintance, have assured me, that their husbands are much more cross just before dinner than afterwards; and are more likely to refuse a favor that is solicited when their stomachs are empty. An individual who has been employed in soliciting subscriptions, informs

me, that among the higher classes, he never applies just before dinner; as he has long since found that the chances of refusal are then much greater: but wait, says he, until they have crowned a hearty dinner with a bottle of wine, and are sitting at ease, watching the smoke as it rises in graceful curls from their Spanish cigar, and then is the time to find them in good humor. This same fact is illustrated in the case of children; they are never in good humor when hungry. It also accounts for the activity of Destructiveness during the excitement of intoxication, sometimes producing the wanton demolition of tumblers and bars; and even the heads of jovial companions frequently become objects of this propensity under these circumstances.

In most cases in which I have had an opportunity to examine the heads of murderers, I have found Destructiveness very large. I have in my possession the skull of Damon, who was executed in 1834, for the murder of his wife, at Fredonia, N. Y., in which this organ is very large, and Kindness small. The skull was presented to me, with a request that I would give an opinion of the character of the individual, while I was unacquainted with the circumstances. The first thing that struck me was the large size of Destructiveness. The circumstances of the offence were so revolting, and his conduct so brutal and unnatural, that his counsel, James Mullet, Esq., urged with uncommon ability and eloquence, the plea of insanity in his favor. "I assign," said he, "the prisoner's fatal act, with all its heart rending consequences, to one of those paroxysms of insanity, which sometimes shatter the strongest intellects,—hurl the proudest reason from her throne, and give to the angel aspect of man, the wildness and fury of a devil. I know that the use of argument, derived from the barbarity of an act, to prove insanity, is taking the aggravation of the crime to excuse the perpetration; still there are some bounds to human

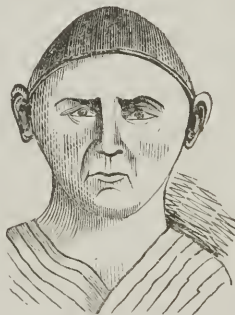
depravity; and some acts so unnatural as to indicate the derangement of the functions of the mind. You, under the influence of a healthy organization, can scarcely endure the story of this shocking act; how then could he, with an equal regularity of organization, perform it? I have no doubt that this terrible disease has, many times before its horrid triumph, seized upon the prisoner, and that the dizziness in the head, of which he so frequently complained, were effects of a weaker form of that disorder, which, in its strength, swept away his reason, and reduced him to the miserable object he now is—an object more fit for commiseration than for punishment—a being unworthy of death, yet unfit to go at large among his fellow men—a proper candidate for a hospital, but not for the gallows.”

“The facts are few and briefly told, but the motives are involved in darkness. When we first look upon this transaction, we feel an involuntary shudder at its aspect. But when we examine it as rational men, and endeavor to search out the cause, we are involved in doubt and perplexity little less painful, and quite unusual in the examination of moral conduct. It is not, in general, very difficult to retrace moral effects to their probable causes, or from the conduct of human nature to infer the motive of action; but this case is an anomaly in moral investigation. We see the devastation and ruin spread around, but find no adequate cause. Like the unseen bolt of Heaven, it has marked its fiery way with desolation; but the cloud which brought it has passed away and left calm serenity in its place. When I say adequate cause, I do not mean a cause sufficient to justify the bloody deed. I mean a cause sufficient to produce such consequences by any of the known laws of human action, influenced by reason and a moral sense, even in their weakest, worst, and most depraved state, short of positive insanity.”

The published accounts state, that the neighbors, on en-

tering the house found Damon standing in the room, red with the blood of his wife; apparently in a state of unconcerned stupidity; while she lay dying in a corner of the room; and a bar of iron, stained with blood, stood near the fire place. He was present at the coroner's inquest, and was afterwards conveyed to the village in chains; but during the whole affair, he exhibited the same mysterious torpidity of feeling, and bluntness of sensibility. He even insisted on attending the funeral of his wife, but the public sentiment revolted at the proposition.

In the New-York State Prison, I examined an individual named Armstrong, who, when only fourteen years of age, murdered his cousin, a girl of eight, by cutting her throat with a case knife, without any apparent motive. His head was so strongly marked, that I requested an artist to take a drawing of him, a copy of which is below.



He was sentenced to fourteen years imprisonment, which is now nearly expired; and he is soon to be set at liberty, without even having admitted that he is sorry for his crime.

I have seen several murderers who had no more than medium Destructiveness; but in such cases the crime originated in a desire for money, or disappointed love, or ambi-

tion, or in some other propensities, the appropriate organs of which were very large, and the higher powers that were designed to prevent the mischief, were deficient. Destructiveness in these cases was only an accessory, aiding and abetting more powerful propensities. The murderers of the unhappy Lyman, in Rochester, had Acquisitiveness much larger than Destructiveness. Feschi, who attempted the life of Louis Phillippe, had not large Destructiveness, but was evidently influenced by misguided Approbativeness, producing a desire of notoriety; he was continually associating his name with great characters; and was ambitious to be considered another Brutus.

Some of the most bloody and revolting crimes recorded in history, were committed through the influence of Conscientiousness, when misled by fanaticism and superstition. Such crimes may be attributed, mainly, to a blind ignorance of duty, rather than a desire to shed blood; therefore the Saviour prayed for the forgiveness of his murderers, "for," said he, "they know not what they do:" and St. Paul, verily thought that he did God service by shedding the blood of the saints. The fires of Destructiveness, never glow with such fearful and unextinguishable fury, as when kindled by the hands of those who act from a mistaken sense of duty. Martyrs, in all ages, have been the victims of ignorance rather than of cruelty. Conscientiousness and Credenciveness, when acting without knowledge, instead of raising man above the lower animals, as they were designed to do, only combined with the lower Ipseal propensities, and rendered him more unmerciful than the most ferocious beasts of prey.

I have just examined the head of Lougel, in Buffalo prison, who has been found guilty of murdering Mr. Rapp with a club. The circumstances were such, as very much to embarrass the court, on account of the difficulty of deter-

mining whether or not the prisoner was insane. It appears that Mrs. Rapp had become enamoured of Lougel; and endeavored to persuade him to kill her husband, by whom she had six children. Lougel refused at first to listen to her; but whenever her husband was absent, she would throw her arms around him, and overwhelm him with embraces; employing all her arts to seduce him to her criminal purposes. At last he began to feel her influence, and conceived the strange idea, that she possessed a supernatural power over him, and that whatever she willed he could not resist. Actuated by this superstition, he committed the fatal act. He made no attempt to escape, or to conceal his offence; but on the contrary, avowed it in the most unreserved manner; stating at the same time that it was not his own wish, but the supernatural influence of the woman, that urged him irresistibly on to the deed. When asked if he did not expect to be punished, he answered, that no human power could injure him; as the Virgin Mary had appeared to him in prison, and assured him of her protection. The court appointed a jury to ascertain whether he was insane; and after having the subject under consideration a long time, they found it impossible to agree. Another jury was then summoned, who, with the same evidence before them, agreed *immediately* that he was perfectly sane; and he was convicted accordingly. The Judges have however, deferred his sentence, to give his counsel an opportunity of appealing to the Supreme Court.

Mrs. Rapp has since been committed for trial. Her head is one of the worst I ever saw upon a woman. Destructiveness, Secretiveness, and Amativeness, enormously developed—Kindness, Perfectiveness, and Conscientiousness, very small.

Lougel, on the contrary, has Destructiveness only medium, and Combaticiveness something larger; but the upper

lateral parts of the forehead, particularly Perfectiveness, Hopefulness, and Credenciveness, are very large, and the Lower Perceptives small, with a very active temperament; the whole organization being such as to predispose him to superstitious and absurd notions; and rendering him peculiarly liable, especially in a state of ignorance, to such delusions as that under which he undoubtedly acted when he struck the fatal blow.

I know many excellent men, with very large Destructiveness, who are severe only when severity is a virtue. Their frown is terrible only to the wicked; and under their protection, the weak and oppressed feel confident of safety.

Such a man was Washington. While his arm wielded the sword of justice, and upheld the rights of his country, he was deaf to the calls of mercy, if duty demanded the sacrifice: even when the amiable Andre was to be the victim, Destructiveness and Conscientiousness predominated, and rendered him inexorable.

V. COMBATIVENESS.

“I dare do all that may become a man;
Who dares do more, is none.”—*Shakespeare.*

The design of this propensity is to overthrow the obstacles which are in the way of enjoyment. It differs from Destructiveness in being satisfied with victory, and does not crush a fallen foe. It only inspires with courage to

“Strike till the last *armed* foe expires.”

The feeling which it produces is *courage*;—the acts which follow the feeling are called hostile, brave, fierce, impetuous, hasty; while those of Destructiveness are cruel, malicious, revengeful. The object of Combativeness is conquest,

but Destructiveness demands extermination. Some of the most bloodthirsty monsters in the world have been contemptible cowards—such was Robespierre and Nero; on the other hand, some of the bravest men have in peace been the most kind and gentle. There is also a great difference in animals in this respect; the bull, the ram, and the hamster, though not destructive animals, frequently manifest a large degree of Combativeness, in combination with the Social propensities. Combativeness borders upon Amativeness, Parentiveness, and Adhesiveness; and when the enjoyment of these Socials is opposed, Combativeness is excited to battle in their behalf.

“ The wren, the most diminutive of birds,
Will fight for her young in the nest, against the owl.”

Combativeness also inspires with feelings of opposition which vents itself in disputes; and, combined with a large intellect, produces literary and political controversies.—Luther, Cobbett, J. Q. Adams, and Brougham, are instances of this kind of manifestation. Combined with very large Conscientiousness, it disposes to moral controversies, such as relate to temperance, abolition, moral reform, &c. I know several individuals, who, having embraced a doubtful or controverted doctrine, seem to take the greatest satisfaction in arguing the point, even when they do not expect to throw any light on the subject. They wish to gain victory, not converts—to confound, but not to convince. If at the same time Secretiveness is large, they love to puzzle and entrap their opponents, by getting their assent to propositions without foreseeing the consequences—but when Secretiveness and Cautiousness are small, and Conscientiousness large, they contend openly, loudly, fiercely, and seem actuated by the spirit of Hamlet, when he exclaimed to Laertes:

Why, I will fight with him upon this theme,
Until my eyelids will no longer wag.

This organ is large in all men who have distinguished themselves by great personal bravery. It is very large in the portrait of the chevalier Paul Jones, who refused to surrender, although his ship was sinking; and threatened to shoot the first man who proposed to ask for quarters.

It is more active in the males than females of all animals; and among some species the natural instruments of war or defence which they possess, such as horns, or tusks, are much more perfect in the males. It is also larger in young men than in those who are more advanced; and they are well characterised by Shakespearc:

Sudden and quick in quarrel;

Seeking the bubble reputation even in the cannon's mouth.

REMARKS ON THE CARNIVEROUS RANGE.

These organs presuppose the existence of the Corporeal Range, and of a vigorous constitution, with a well developed muscular system: for animals that are weak, and slender, would only devote themselves to certain ruin, if their offensive propensities were to predominate. Those animals therefore, which are the boldest, and most ferocious, are also the strongest of their size. Not only so, but their muscles are adapted to their dispositions; thus, the muscles of the carnivora are developed in such a manner as to enable them to rend their prey; but those of the herbivora, are only adapted to flight, or to undestructive contention with their own species. In harmony with these principles, we generally find persons with this Range large, possessing a good developement of the muscular system. There are however, so many exceptions to this rule, that superficial observers will be likely to deny it. If any object to naming the dif-

ferent Ranges of Ipseals, according to the class of animals that manifest them in the greatest degree, and prefer to name them according to the functions which they perform, then this may be denominated the *Offensive Range*; and the Herbivorous Range, the *Defensive Range*; the Rodentia, the *Appropriating Range*; and the Human, the *Perfecting Range*. Perhaps this would be the most philosophical. It appears to me certain, that these organs are developed in Ranges, according to the order in which I now prefer to consider them. I think I have discovered the natural classification—I did not *invent* it, and am not disposed to dispute about names.

HERBIVEROUS RANGE.

VI. SECRETIVENESS.

To beguile the time,
 Look like the time; bear welcome in your eye,
 Your hand, your tongue: look like the innocent flower:
 But be the serpent under it.—*Shakespeare.*

This is the propensity to conceal—to prevent others from knowing the thoughts and intentions that are entertained concerning them. Suspicion is a disagreeable feeling, which depends principally upon this propensity. Those who have it large, are inclined to suspect that all appearances of good will are deceitful—that professions are hollow and insincere; and that there is in every one a disposition to sacrifice the interests of others, to the advantage of self. The situation of this organ, between Destructiveness, Cautiousness, and Acquisitiveness, explains why it is so apt to combine in

action with those propensities. Among animals, it either combines with Destructiveness, as in the Carnivora, to plot mischief against others; or with Cautiousness, as in the Herbivora, to avoid secret dangers; or with Acquisitiveness, as in the Rodentia, to acquire property secretly. The *actions* which it produces are indirect, roundabout, and such as appear to have a different aim from that which they really do. How far the schemes which originate in Secretiveness shall be successful, depends very much upon the intellect; we accordingly have knaves of every degree of intelligence; some lay their stratagems so foolishly that they cannot possibly escape detection; their very faces are so indelibly stamped with the natural language of this propensity, that every one is thereby put upon his guard. But there are men whose large Secretiveness is so combined with intellectual and other powers, and who are so thoroughly acquainted with human nature, that it is almost impossible for any eye, but that of Omniscience, to discover their deep and comprehensive designs. Shakespeare has drawn a most perfect illustration of this kind of character, in his Iago, and also Richard the Third, who says to himself:

“ Why, I can smile, and murder while I smile;
And cry content to that which grieves my heart;
And wet my cheeks with artificial tears;
And frame my face to all occasions.”

I have seen very dishonest men, who had small Secretiveness, and large intellect and Cautiousness; they generally pride themselves upon their cunning, and ability to deceive; but they deceive themselves most—they mistake caution for secrecy—and talent for cunning. They are apt to overlook some secret means of detection, or they forget to conceal something, or unconsciously allow some expression to escape them, which leads to their exposure. They are unable to compete successfully with those who have equal intel-

lect, and more Secretiveness. I have always found this organ large on successful rogues; it enables them to assume the appearance of honesty, by suppressing the expression of their real feelings.

It is large in most of the celebrated European politicians; in Talleyrand, Metternich, and in Pozzo di Borgo; and enabled them to rise from obscurity, and exert a powerful influence upon the destinies of half the civilized world. Such men possess a profound, and almost intuitive knowledge of human nature, in its secret operations. Artifice, in order to impose upon them, must be most perfect; a single movement of the eye, or features, or the least equivocation of voice, or manner, is sufficient to excite their suspicion, and set them upon their watch. The following anecdote, however, which is related by Gen. Ducordray Holstein, shows, that without the aid of phrenology, even Metternich may, for a while, be greatly deceived by an accomplished villain:

In the winter of 1814, Prince Metternich gave a splendid ball, at which, all that beauty, fashion, birth and wealth could unite, were assembled in his palace. All the ambassadors, the grand officers of the crown, in their brilliant dresses, with crosses, stars and ribbons, a numerous assemblage of young, handsome and distinguished women, covered with diamonds, and dressed with the greatest elegance, were present. Among this crowd of high personages were distinguished the beautiful princess de S, born princess of C . . . ; and the young count of Pef . . . , whose high rank, brilliant exterior and amiable qualities had gained him, during his short stay at Vienna, the admiration and good graces of the emperor, prince Metternich, and all the higher circles at Vienna. The count had left his estates in Bohemia, and came for the first time to the court of Francis to pay his homage as one of his vassals. Metternich had already destined him for a high office.

The celebrated Doct. Gall was one of the guests, and on intimate terms with the all-powerful premier. He approached and asked him, "Now Doctor what do you think of this brilliant count Pef . . . ? During the fortnight of his stay, he has already enchanted our ladies. I seldom have found so many of the graces, such nobleness of manners, united to so much knowledge and talent. The emperor is very fond of him, will choose him a wife and attach him to our court. I predict for him a quick rise and a high destiny. What do *you* say, Doctor, or think of him?"

"I have seen him but a few minutes, when you conversed with him, but—"

"How then Doctor? would you so hastily judge and apply your system to him also?"

"My judgment is for the present formed by having observed him when he spoke with you; and I have not closely examined him to tell you exactly what I fear; but a fine outside is not always the indication of good and eminent qualities."

"Oh! Doctor, said Metternich, smiling, I may readily give him up to your close examination. Analyze his features; feel his protuberances as you call them; and I am convinced you will readily agree with me, that a nobler mind or soul has never taken its abode in a finer body."

"Perhaps, perhaps," said the Doctor.

This curious and singular conversation was going on when the count Pef . . . danced with the beautiful princess Shew . . . , and attracted general admiration. Metternich, after having left the Doctor, was struck with his remark, and observed at a distance that Gall approached the count to examine him closer by. Curious to know what the Doctor thought, the prince asked him his opinion. Gall without answering, took him aside out of the crowd. When alone, he said to Metternich, "Your favorite is but a profound villain."

“Doctor,” replied the prince, laughing, “you jest or your whole system appears to me very strange.”

“You would perhaps not listen to the reasons upon which my opinion is grounded; but let us wait. Time alone shall show which of us is right or wrong.”

Metternich laughed heartily at the *mania* of the Doctor, as he said; left him and thought no more of it.

In April, 1816, a horrid unheard of crime was committed in Germany. The perpetrator was arrested, tried before the Supreme Court of Justice, and sentenced to be degraded from all his titles and dignities, and then beheaded: the sentence was executed at Prague the 15th of June, the same year.

The criminal was the same brilliant count of Pef , the favorite of Francis and Prince Metternich!

The fact that Secretiveness is so much used, or rather abused by rogues, renders a good developement of it the more necessary to the friends of justice; to enable them to detect the machinations of the wicked. Mr. Hays, the celebrated High Constable of New-York city, has it very large; and is consequently capable of conceiving the probable course which a villain will be likely to pursue in a particular case; and of suggesting plans and stratagems, to circumvent and bring him to justice. It generally happens that petty scoundrels have small intellect and Conscientiousness, and large Secretiveness. They are cunning, but not wise; an officer therefore, who has Secretiveness equally large, with an intellect much larger, has greatly the advantage of them; and frequently astonishes both them and the public also, by his superior sagacity. I know several merchants, who have failed in business, for no other reason than because they were too deficient in Secretiveness to suspect the selfishness and treachery of pretended friends. Honest themselves—frank, open, and confident, they cannot understand

the feelings which actuate those who have an organization of a contrary kind. Experience only teaches them wisdom and prudence, but not cunning—to avoid knaves, not to outwit them. Washington had Secretiveness large; and Mr. Jefferson justly remarked, that he showed to much greater advantage in the management of secret enterprises—in manœuvres to get the advantage of the enemy, by gaining commanding positions—by coming upon them unexpectedly, and cutting them up in detail, than he did in the open field. The evidence of this is found in the stratagems by which he forced the enemy to evacuate Boston; his retreat across Long Island Sound, and the Delaware River; and his sudden descent upon the British and Hessians at Trenton and Princeton. This great man was also said to be suspicious; and to detect easily the real characters of those with whom he associated or encountered, so as rarely to be deceived.

VII. CAUTIOUSNESS.

First fear his hand, its skill to try,
Amid the chords bewildered laid,
And back recoiled, he knew not why,
Even at the sound himself had made.—*Collins.*

This is the propensity to avoid danger. The operation of the Lower Ipseals, which I have already described, is such as to produce a necessity for this propensity. Animals, in their eagerness to enjoy air, and food, and ease—and in their violent struggles to rend their prey, or to overthrow the obstacles to enjoyment, necessarily run into innumerable dangers, which this is designed to make them avoid.

The great utility of this propensity is demonstrated by the consequences which may be sometimes observed to arise from its deficiency; or from the other propensities, when unrestrained by its influence. Goaded by Alimentiveness, we sometimes see animals perfectly reckless of danger. The hamster, mastiff, and game-cock, in their eagerness for contention, seem to overlook the superiority of their opponents, and thus they sometimes unconsciously devote themselves to inevitable destruction. Other animals are prevented from doing the same by Cautiousness. I have seen whole families in which this organ was very small; and the number of their scars, caused by scalds, burns, carelessness in the use of edge-tools, upsetting of carriages, and unnecessary quarrels, bore ample testimony to the importance of this wise provision. One of them was a fisherman, who once went in a boat to Providence, without taking any provisions with him; and a storm keeping him several days at sea, he like to have starved; he afterwards facetiously declared that he would never trust to Providence for provisions again. Some people are always meeting with *accidents*; they can scarcely go a journey without bringing back an account of some misfortune which has befallen them; nor can they engage in any business without meeting with uncommon losses; or carry out any enterprise when carefulness is requisite, without some disaster, which they attribute to any thing but the true cause. When such persons are deficient in the lower percepts they are very phrenologically denominated *blunderheads*.

This propensity not only presupposes the existence of the Lower Ipseals, but also such an amount of intellect as to enable the individual to act from experience. A memory of events is particularly necessary, and perhaps a degree of reasoning power; since in order to be properly cautious, we must *infer* present and future danger from past events.

Cautiousness is larger in children than grown people; and this accounts for their astonishing escapes from injury, when sporting amid a thousand dangers. It is also much the largest in females; they are proverbially timid, apprehensive of danger, and opposed to strife in which they must openly take part. I have also noticed that the organ becomes larger as man advances in age; young men are more apt to be hasty, rash, impetuous—

“Sudden and quick in quarrel.”

This difference cannot be altogether attributed to the greater wisdom and experience of age, for in some instances young men are both ignorant and timid; and in others, old men are very intellectual, yet reckless of danger.

Cautiousness is well developed on the most successful military men of modern times; the Carniverous or Offensive Range only serves to get them into danger, and Seeritiveness and Cautiousness are necessary to prevent rashness: when these are well combined and directed by intellect, the individual becomes a dangerous opponent; while he is bent upon conquering his enemy, he at the same time is careful not to expose himself.

“’Tis much he dares;

But to that dauntless temper of his mind

He joins a wisdom that doth guide his valor

To act in safety.”

When Dr. Gall discovered this organ, he called it *foresight*; because he first found it large in several individuals who were disposed to hesitate, doubt, and look forward prudently to consequences, before they said or did any thing irrevocably; but Spurzheim perceived that this was the effect of the propensity under consideration, combined with intellect, and he therefore changed the name to Cautiousness. Most of the herbivorous animals manifest it in a high degree; they have nothing to gain by destroying other ani-

mals; and except in self defence, or in defence of their young, they never contend with other species of animals. Their mode of life, and their means of obtaining food, are peaceable. The males of herbivorous animals sometimes contend fiercely, with other males of their own species, for the females; but this is only at certain seasons, when acting under great excitement from the activity of their social propensities; but they will fly in terror from the attack of a carnivorous animal not one tenth their size, and which they might crush at a single blow. Cautiousness was not intended to help animals out of difficulty, but to keep them out. Those very animals which are the most desirous to avoid danger, and which exert themselves the most vigorously to keep out of harm's way, submit with the most quietness to the infliction when it is present; whereas those which are the most reckless in their attempts to injure others, for their own gratification, make the greatest ado when a personal injury is inflicted upon themselves. Cautiousness then, needs more intellect than the lower Ipseals; or rather, it is related to *higher* intellectual powers; and the philosophical student of Phrenology will perceive that the higher organs of each class, in their very nature, presuppose the existence of the higher organs of the other classes. Without keeping this principle in mind, we shall be liable to take a too limited view of the functions of the superior powers: they are all more *general* in their effects—they take a wider range and exert a modifying influence upon those below them. This will be the more obvious when I have explained all the superior propensities, and it will be perceived, that the nature of all the powers becomes more and more general as we rise in the scale.

RODENTIA RANGE.

VIII. CONSTRUCTIVENESS.

I will pull down my barns, and build greater.—*Luke.*

This is a propensity to adapt the productions of nature to our own purposes by changing their form, size, weight, color or order; and in the calculations necessary to accomplish this end, we are greatly dependent upon Number. So intimate is the relation between this propensity and the lower percepts, that some Phrenologists have considered it as partaking of the nature of an intellectual faculty, and have denominated it *semi-intellectual*; but it is very easy to demonstrate that it is in no degree intellectual; however largely developed it may be, it never bestows mechanical *talent*, unless the percepts are large. In this respect it resembles every other propensity, and gives its possessor a *feeling* of pleasure, which, in common language, is called a fondness of mechanics—a taste for architecture—a love for construction, &c.—and those who have it large, have a great proneness to be engaged in mechanical operations, such as are in harmony with their other powers. How far an individual will be successful in his mechanical performances, depends altogether upon his intellect; but how much pleasure will be experienced in construction, depends upon Constructiveness. I know some persons who are excellent artists, with small Constructiveness; and others who are miserable bunglers with this organ uncommonly developed.

Constructiveness borders upon the percepts, and when active, stimulates them into a state of activity. It is important to observe, that those propensities which are most de-

pendent upon knowledge, are nearest to the intellect. Spurzheim remarked that "organs of analogous powers, are regularly in each other's vicinity;" and I add, that organs which are most dependent upon each other, are always near neighbours. This is to me sufficient explanation of what has been called the semi-intellectual nature of those propensities which border upon the intellect.

I have seen many persons with large Constructiveness, and large reflectives, and moderate perceptives; they generally excel in mechanical contrivances, but fail in practice. They will sometimes make good general superintendents, and can *judge* well of the nature, and expediency of operations which they cannot perform. They make better masters than journeymen. Again, there are some men who, although first rate workmen, cannot proceed a step beyond their instructions. They can work by imitation, or by rules which others lay down; but the moment they are left to their own judgment, without any precedent, or model, or overseer, they are in a maze of perplexity. Under these circumstances, they are frequently directed by the judgment of a person who is totally ignorant of the use of the instruments, and who could never have equalled in practice the laborer whom he directs. With large Perfectiveness, this propensity gives a fondness for the fine arts, and constructions of the improved and ornamented kind.

In the lower animals, Constructiveness is manifested in the highest degree, particularly by that subdivision of the mammalia denominated the Rodentia or Gnawers. Their teeth and claws are formed so as to qualify them for constructing habitations of wood and earth in their peculiar manner with wonderful skill. It is remarkable that animals construct instinctively upon the most correct mathematical principles. Their perceptives seem to be adapted to the principles of nature in such a manner, that they can neither

err nor vary nor improve: there is a relation established beforehand, by the Creator, between their powers and certain structures, so that whenever their powers begin to act, they must act according to a certain established, and inviolable law of their constitutions; for this reason they cannot essentially improve by education, nor lose their peculiar talent by neglect.

IX. ACQUISITIVENESS.

And there will I bestow all my fruits and my goods.—*Luke.*

The propensity to acquire property, is as plainly manifested by the Rodentia tribes of animals, as it is by man; and it is a curious fact, that they acquire nothing except for the gratification of their Corporal Range, and particularly for Alimentiveness. It is also remarkable, that all the animals that acquire property, first make use of their Constructiveness to prepare a proper store in which to deposit and preserve it for future use. The beaver for instance, first makes use of his Constructiveness to gnaw down trees and build a convenient hut, and *afterwards* acquires bark to gratify his Alimentiveness during winter. The rat also, that notoriously thievish animal, first prepares a nest, or hiding place, by gnawing and digging in a manner nearly as ingenious as the beaver, and then begins to acquire provisions for winter. The same is true of all the Rodentia. It is interesting thus to trace the connection between the propensities of Alimentiveness, Constructiveness and Acquisitiveness, and at the same time to observe the manner in which they are chained together in the brain.

Acquisitiveness was first discovered by Dr. Gall, upon thieves; and was therefore imprudently named the organ of theft. This, with other similar errors, was the means of much ridicule being brought upon his system of "Cranioscopy;" but after Spurzheim adopted the more appropriate name of Acquisitiveness, and explained it as a very useful propensity, which produces economy, and industry, and wealth—the public became more reconciled to it. It is well developed on successful merchants; and is the source of the pleasurable feelings which they experience, when they see their property increasing. It is large on Dr. Adam Smith, the distinguished author of the *Wealth of Nations*. It is much larger on Negroes than Indians—on the Scotch than the English and French—on the people of New England than those of the Southern States. I have found it generally large in the inhabitants of the new settlements of the West, where people from all parts of the world had flocked together, leaving their homes and friends, and sacrificing all the ties of society to acquire wealth.

Notwithstanding the great utility of this propensity, there is none which is so much abused, particularly in this country. None which is the basis of so much misery and vice—which produces so many of those effects that make the philanthropist shudder with feelings of wounded "Kindness and Conscientiousness." The meanest and most despicable tricks are resorted to, even under color of law and in the hallowed name of justice—the blackest and most damning crimes stain the records of every court, or escape through bribery their merited punishments. The innocent, the ignorant and unwary, are despoiled and robbed of every thing which renders life desirable. Liberty is bought and sold—the temples of virtue, and of true religion, trampled to the dust, and their name and garb assumed to mock insulted Deity—education despised and neglected, and together with

the support of the aged and the orphan pauper, disposed of to the *lowest* bidder—and all this to gratify a single propensity!

“If not so frequent would not this be strange?

That 'tis so frequent, this is stranger still.”

Man differs from other animals by the all grasping nature of his Acquisitiveness; he is not content to preserve the bounties of nature for future comfort merely—for food, or clothing—the whole material world is searched for things either of natural or artificial value—every ocean and river, every mountain and mine is stripped of its treasures—the lives of animals are sacrificed without number, and without mercy; not only to furnish food, clothing, light, and medicine, but even for mere ornament or show. Living animals also are acquired and reduced to labor to increase his wealth. Not content with this, he often assumes possession of his fellow men, and disposes of them for the gratification of his misdirected Acquisitiveness. Even his own health and personal comfort are frequently sacrificed to save property which he can never enjoy—which he only desires to *possess*—and does not wish to appropriate to his happiness and comfort.

Dr. Taylor, member of Congress from Manlius, N. Y. while I was at his residence, informed me that one of his patients, a boy of fourteen, although most dangerously ill, refused to take medicine until his father offered to pay him five dollars; after stipulating that it should be specie, and paid down, he consented—received it—counted it over with the most intense eagerness and satisfaction—added it to his previously acquired store—then drawing the clothes around him, said he was ready to perform his part of the contract. The organ of Acquisitiveness was so extremely developed, that the Doctor, though a total disbeliever in Phrenology, was forcibly struck with the coincidence, and was from this

circumstance led to make a great number of observations, and finally, in a public meeting, after a very interesting discussion, declared his thorough conviction of the truth of Phrenology. Dr. Taylor had but a short time previously, assisted his friend Dr. Sewall, of Washington, in publishing a work in opposition to Phrenology. This change of opinion therefore, and the characteristic frankness with which it was avowed, was equally gratifying to the friends of the science, and honorable to the distinguished individual who made it.

This propensity manifests itself in so many different ways, and is so much modified by the other powers, and by circumstances, that it is frequently difficult to make an individual understand that he has it very strong. Some, with a very large Acquisitiveness, are perfectly honest and noble in their dealings; they would not, for the wealth of all the world, sacrifice the great principles of morality; but they endeavor to gain property by every honorable means in their power; they rise early, and sit up late—they are very industrious, and attentive to all their pecuniary affairs—place a high value upon their time—allow nothing belonging to them, or left in their charge, to be wasted or injured through neglect—they not only acquire, but preserve with great care—keep a watchful eye upon their agents, and insist upon having every item accounted for: while they are ready to pay every farthing that may justly be charged against them, they in return insist upon all that is due to themselves—they frequently give with great liberality to the poor, and to the support of useful institutions; but they are careful not to give *all*—and they feel greatly shocked and offended, to learn that their gift has been appropriated without regard to economy—they love to repeat the prudent maxims of Franklin, and show the young “the way to wealth”—they take great pleasure in seeing their property accumu-

lating—they never lose an opportunity to make a good bargain, and in the language of Burns,

To catch dame fortune's favoring smile,
Assiduous wait upon her,
And gather gear by every wile
That's justified by honor.

I have generally found Order and Number larger on those with predominant Acquisitiveness, than those who have it small; probably this is owing to the fact that these organs generally act together; large Number is necessary to calculate loss and gain with facility, and Order to arrange the acquisitions in such a manner as to preserve them to the greatest advantage. I know several merchants who have failed, because they neglected their book accounts, and in them all I found small Order and Number. When large Acquisitiveness is combined with a large intellect, the reflectives predominating, and Cautiousness medium, with Hopefulness large, then business will be likely to be done on a large scale—the plans will be comprehensive and complicated, yet systematic and reasonable. The loss or gain will be such as to produce the most important results; sometimes affecting whole nations by a single transaction; and even changing the policy of the most powerful governments. But when Acquisitiveness is combined with a small Hopefulness, and a very large Cautiousness, the transactions are of the most limited kind; a sure retail business is preferred, and capital, instead of being employed to extend the business, is lent on bond and mortgage. All the operations are small, the risk is little—the profits are small—the expenses are moderate—every thing is contracted within the narrowest bounds. In some extreme cases of *voluntary littleness*, the character is strongly marked in the personal appearance. Alimentiveness is made to suffer—the lean, gaunt body is contracted within threadbare garments, which are

too small in all directions—the snivelled features sharpened to a point—the upper lip drawn towards the nose, exposes the incisive teeth—the fingers crooked to resemble claws—the body bent forward—and the whole figure and expression resembling a rat in a sitting posture. Long before I thought of the relation between the Rodentia Range and the Rondentia Class of animals, I was struck with the resemblance, in expression and appearance, between misers and certain animals of the Rodentia Class, particularly squirrels and rats, when engaged in gnawing. This observation, though seemingly of little consequence at first, led me to some very important results, a detailed account of which I intend to give on some future occasion, in a separate volume.

I have in my collection, a plaster-paris cast of the brain of a man who was killed in a quarrel for a few shillings, which he endeavored to obtain unjustly; the organs of Secreciveness and Acquisitiveness are extremely developed, and Firmness and Imperativeness are large, but Conscientiousness is comparatively small. The whole organization is eminently selfish, and is very different in this respect from several other brains, the casts of which I have by me.

PERFECTING, OR HUMAN RANGE.

X. PLAYFULNESS, OR WIT.

See on yon carpet, mantled o'er with flowers,
 A little babbling playful tribe disport;
 As yet, no cloud o'er shades their joyous hours,
 Nor serious thought intrudes, nor reason holds her court.

Anonymous.

When this was first discovered by Dr. Gall, he called it the organ of Wit, because he found it large on those who

were remarkable for their witty productions. Gall said that he could find no better method to describe it, than as the predominant intellectual feature in Rabelais, Cervantes, Racine, Swift, Sterne, and Voltaire. In all these authors, and in many others who manifest a similar talent, the organ is large. Dr. Spurzheim admitted that the organ was large on witty persons, but denied that it was an *intellectual* faculty. He considered it as a *feeling*, "given to man to make him merry—to produce gaiety." Mr. George Combe, Mr. William Scott, and Mr. Hewett Watson, of Edinburgh, agreed with Dr. Gall, that it is an intellectual faculty. Mr. Combe, in his first edition, classed both this and Imitation with the Reflectives; and Messrs. Scott and Watson, in several very able, but rather metaphysical disquisitions, which were inserted in the *Phrenological Journal*, have supported their different views at considerable length. Mr. Scott considered it the faculty which perceived *differences* and *incongruities*, while Comparison perceives *resemblances*. Mr. Watson defines it, as the faculty of perceiving the "nature or intrinsic qualities of things." When Dr. Spurzheim was last at Edinburgh, he demonstrated by dissection of the brain, that "anatomically, Ideality and Wit belong to the same department of convolutions; whence," says Mr. Combe, "a presumption arises, of their belonging to the same class of mental faculties: and as Ideality has been uniformly regarded as a sentiment, Wit may with propriety be placed under the same head." Accordingly, in Mr. Combe's last edition, he includes Wit and Imitation among the higher feelings, "to preserve uniformity with Dr. Spurzheim." Mr. Combe however, continues to name it the organ of Wit, while Dr. Spurzheim calls it Mirthfulness.

After having given the different views of others, I will take the liberty of presenting my own.

I consider it the propensity of Playfulness in general,

bestowed upon all the higher animals, to impel them to improve and perfect their powers, by sportive exercises. It never seems to have occurred to Phrenologists, that animals possess this power; their observations have been hitherto confined to its operations when in combination with the higher intellectual powers; and they have altogether overlooked its more ordinary manifestations. It is an interesting fact, that those animals which are longest in arriving at maturity, and which perform the most complicated actions, manifest the most Playfulness. They are also more perfect when matured than those which manifest but little disposition for sport. It is much more active when animals are young; their powers in an imperfect state, and they are incapable of engaging in the serious pursuits which become adult age. This propensity can with difficulty be attributed in any degree to the lowest classes of animals; its very nature, and also its high rank, seems to imply that the individual arises gradually to maturity. It is very slightly exhibited by fishes and reptiles, which are the lowest of the vertebrated animals. Birds are higher in the scale, they have longer youth, and they play considerably. The highest class of animals is denominated mammalia, because they have teats, or mamma, and suckle their young. As a class, they manifest much more Playfulness than fishes and birds. They are subdivided by naturalists into several genera; and each genera into several species. Those species of them which perform the most complicated and intelligent actions, manifest the most Playfulness. This seems to be necessary to qualify them to use their powers with the requisite facility. The most remarkably playful animals are the cat, dog, and monkey tribes, (the canine, feline and semiæ genera,) and these are very imperfect at birth—arrive gradually to maturity—enjoy the fostering and providing care of affectionate parents—and have very complicated operations to perform.

Playfulness to them, therefore, is a highly useful propensity. It is worthy of remark, that the cetacea, or mammalia that live in the sea, and which naturalists do not class with fishes, such as the whale and dolphin, are much more playful than the fishes; they are also longer in coming to maturity, and are as regardful of the wants of their dependent young as the most indulgent quadruped.

Playfulness then, is a propensity, implanted in the minds of men and animals, for a wise purpose. It is the means by which the children of nature are educated, their powers exercised during youth, and thus gradually improved and perfected for vigorous and serious action, when they arrive at maturity. It follows, that there are as many kinds of play as there are different powers to be brought into action; we accordingly see animals using sportively in youth, the same propensities that are peculiar to the species, or to the individual, when at middle age and engaged in earnest. Thus the kitten plays with a ball, and evidently imagining it a mouse, goes through all the movements in sport that she would if the real animal were in its place; and calls into action the same propensities; she hides, and crouches, and watches, and springs, and seizes, and tears it—with the same low growl and fierce demeanor, that characterises the serious efforts of the full grown cat. The puppy also, impelled by the same playful propensity, exercises all his carnivorous powers upon a piece of cloth, shakes and rends it as lustily, as if it contained the essential elements of his future prey. The same remarks will apply to many other animals. The play of the lamb and the dove is as innocent as their subsequent habits. The colt runs, jumps, snuffs up the air, “fetches mad bounds,” kicks, paws up the earth, and seems to revel in the happy consciousness of his expanding powers. Precisely analogous to these is the playfulness of a child. No animal is so long coming to

maturity, none perform such various actions when mature, and none manifest Playfulness during so long a time. The first twelve or fourteen years of human life, is an almost uninterrupted scene of play. The wants of necessity are provided for by parental care; and the child has only to enjoy and exercise his growing powers. Upon the same principle that the sports of animals indicate their characters, the child exercises in sport his predominant and most largely developed organs. Is the Corporeal Range large—his sports will be of an athletic kind. If the second or Carniverous Range—contentious, daring and cruel sports will then be most gratifying. If the third, or Herbiverous Range predominates, the noisy and dangerous and rude exercises will be avoided and gentler ones substituted. If Constructiveness and Playfulness are large, the child will play build, and thus sometimes manifest the mechanical talent in a high degree. If Acquisitiveness, then a mimic store will be kept, bargains will be made, money coined, and accounts kept. If the Socials are large, they will combine with Playfulness, and the doll, and the baby house will be introduced, schools kept, governments established and overthrown, and all under the influence of this propensity.

We are now prepared to define Wit as the Playfulness of the intellectual faculties expressed in words. The most refined and elegant specimens of wit, are the result of a combination of all the higher powers, acting under the influence of this propensity; and low wit, or humor, results from the same principle applied to the lower powers. Every specimen of wit that can be produced, may easily be referred to the playful operation of some organ or combination of organs. Irving and Maryatt, both have large Playfulness, Eventuality and Language; and they are consequently distinguished for writing amusing and playful narratives. Franklin, Sterne, and Voltaire, had it combined with Caus-

ality, and they represent powerful arguments in a sportive manner. Voltaire added a very large Imitativeness, and he had an uncommon faculty of dressing up and distorting serious truths, so as to make them resemble those ideas which are not meant in earnest; and in this way destroyed their force. If he could show that it was unreasonable and foolish to look upon a proposition as seriously intended, his point was gained; and in order to do this, he was obliged to repeat it over, adding to it, or illustrating it in such a manner as to infuse into it an appearance of such palpable absurdity, that it could not be supposed to have been seriously meant.

The great resemblance between serious and playful actions and ideas, renders it sometimes extremely difficult to mark the line of distinction. It often happens that the conduct, or language of a person, is such as to render it doubtful whether he is in earnest or not, especially if he has large Seeretiveness. If he pretends to be in earnest, we reply by showing that his ideas are such as to be inconsistent with seriousness. Playfulness is opposed to gravity, and witty remarks, when used against argument, are such as tend to prevent the subject under discussion from being considered worthy of serious debate. Dr. Franklin, when a member of the Pennsylvania Legislature, opposed a proposition to confine the right of suffrage to those who possessed property worth two hundred pounds. "Suppose," said the Doctor, "that all a man's property amounts to exactly the requisite sum, but among his possession he reckons a donkey; of course, by this law the man is to day a voter, but tomorrow the donkey dies, and the right is gone. Now where did the right of suffrage lay—in the man or in the donkey?" Almost every instance of Franklin's wit was of a similar character; he attempted to show that the proposition was such, that no man of common intelligence would

entertain it seriously. The propensity to be witty depends upon this organ, but the kind of wit depends altogether upon the other powers that combine with it: thus punning is the playfulness of Language, and is very properly considered the lowest species of wit, as the organ of Language is one of the very lowest in the brain. Comic acting is produced by Playfulness and Imitation, and comic music by Playfulness combined with Tune. Hogarth had very large Playfulness, Constructiveness, Form, and Color, and this enabled him to excel in painting comic scenes.

The organ is much larger in children than adults, as any one may easily ascertain by examination. I have often seen them manifest it in a very high degree, in combination with Destructiveness, by continually teasing and tormenting their mates—all in fun. It seems to me, that since the sports of children consist of the active exercise of their largest organs, it is important that their games should be properly regulated; so that their constitutional predispositions to vice, may not be increased by habit, association, and exercise. I repeat it, I consider Playfulness as the means by which the children of nature are educated; and therefore, all artificial systems of education should be based upon this principle. Entertainment and instruction should always be commingled; and as far as practicable, should be adapted to the peculiar dispositions of the pupil.

XI. PERFECTIVENESS, OR IDEALITY.

Beautiful! How beautiful is all this visible world!
How glorious in its action and itself!—*Byron.*

When this organ was first discovered, it was called the organ of Poetry, because it was found large on distinguished poets. It was afterwards observed to be equally large on celebrated sculptors, musicians, orators, and all those who were uncommonly devoted to the fine arts, and manifested a quick perception of the beautiful. Dr. Spurzheim, perceiving the necessity of changing the name, adopted that of Ideality, which signifies ideal beauty, or a kind of beauty which is superior to reality, and which exists only in imagination. Mr. Combe considers Ideality as “an elegant and appropriate name.” It is certainly elegant and euphonious, but I cannot admit that it is appropriate; I have therefore adopted that of Perfectiveness, by which I mean the propensity to improve and perfect. So far is it from being related to a kind of beauty which is superior to nature that I consider it as directly related to the works of nature, particularly those which are perfect of their kind. One of the traits of character which distinguishes man from other animals, as much, and perhaps more, than any other, is the propensity to improve. He not only continues to accumulate knowledge, and to improve in the skill and beauty of his performances from infancy to manhood, but from age to age he is capable of progressive improvement. There are different degrees of perfection, in all organized beings; every kind of vegetable, and even the most unsightly animals, may be more or less perfect of their kind, and are

therefore appropriate objects for the gratification of Perfectiveness. I have seen gardeners with this organ large, pluck up valuable trees and shrubs and plants, and supply their places at great expense with others of a more perfect kind. The same is true of the productions of nature in a collective or grouped state, when a variety of lovely and noble objects are brought into juxtaposition, so as to constitute a magnificent and perfect scene. It is easy to conceive that such a mind as Byron's, would feel inspired with this propensity, when from some lofty eminence he looked around upon one of the most enchanting scenes in Italy, and exclaimed with rapture,

“Beautiful! How beautiful is all this visible world!”

Some might have gazed upon the same scene, without thinking of any thing but the value of timber, or the number of cattle that could feed there to advantage.

The lower animals give no evidence whatever of their admiration of the beautiful.

“Brutes graze the mountain top, with faces prone, -
And eyes intent upon the scanty herb
It yields them; or recumbent on its brow,
Ruminate *heedless* of the scene outspread
Beneath, beyond, and stretching far away
From inland regions to the distant main.
Man views it and *admires*.”

This propensity seems to modify and exalt the aim of all the powers with which it combines. It disposes them to rise above mere utility, or rather, it crowns the productions of utility with ornament. Does Alimentiveness require a repast? this propensity insists upon its being served up with elegance, and is disgusted with the idea of feeding like a mere animal. Does Constructiveness inspire the mind with a desire to build a house? Perfectiveness wishes to have it in the best style; not merely warm, convenient, and comforta-

ble, but splendid and perfect in every respect. Does Acquisitiveness desire to accumulate property? it inclines him to do so in the most noble and refined manner; it soon becomes wearied with the dull monotony of mere business, however profitable. In this manner it very much modifies Acquisitiveness, rouses it from the mean and grovelling pursuits to which it is prone, when this propensity is small, and demands time for improvement. The majority of thieves have this organ deficient, particularly those which commit petit larceny. It frequently deters men from little crimes, not because they are wrong, but because they are mean. I once saw a highway robber with large Perfectiveness, and speaking of himself, he said, "I do not skulk around for my prey like a thieving owl, but I pounce upon it like an eagle." The artist who has it large, is continually searching for the finest forms in nature, for his models. The proudest achievements of genius, are but imperfect copies of natural beauty. In almost all the complicated productions of nature, certain parts are much more perfect than others; and the artist, by selecting from a great number of specimens, the parts which happen to be most perfect, and grouping them artificially together, is able to produce a *combination* superior to any that can be found in reality. The florist, can select the most beautiful flowers of the season, and with them form a bouquet more exquisitely beautiful, and better adapted to please the human mind, than any that can be found in nature. The sculptor, or painter, proceeds upon the same principle, when he produces a Venus, an Adonis, or an Apollo. He finds upon one individual a beautiful forehead, upon another a nose, or an arm, and by combining all the individual instances of perfection in one statue, he seems to excel nature, when he has only grouped together a number of imperfect copies of her most perfect productions.

Poetry is the perfection of language. We may combine words in such a manner as merely to be understood; but if this organ is very large, its possessor will choose a noble subject, use the most elegant and refined words, and combine them in the most graceful style; the illustrations also, will be chosen, not for their propriety only, but for their beauty, gorgeousness, and splendor. Every thing low, vulgar, mean, or common, will as far as possible be avoided. The images which spontaneously rise in such a mind, and which will be entertained with the greatest delight, will be of the highest order. In looking around upon the face of nature, the attention will be particularly directed to such objects as are adapted to this propensity—so that afterwards, when writing upon any subject, the images of the objects thus noticed will be involuntarily presented to the imagination, and described in the glowing language of poetry.

“ The poet’s eye in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to heaven”

to find ideas fitted to illustrate, amplify and adorn his subject: and if his inspired vision cannot light upon any *known* objects “ that suit his large desires,” he resorts to invention, and his prolific

“ Imagination bodies forth,
The forms of things unknown.”

Like an aspiring æronaut, he cuts himself loose from the dull and prosing circumstances that confine him to the atmosphere of ordinary life—soars above the clouds—takes his station among the stars, and looks down through “ the dizziness of distance” upon this lower world, where all common objects are lost in obscurity, and only the grandest and brightest can be distinguished. Such were the aspirations of Shakespeare, when he exclaimed,

“ O for a muse of fire, that would ascend
The brightest heaven of invention:

A kingdom for a stage, princes to act,
And monarchs to behold the swelling scene."

And such also must have been the feelings of Milton, when he invoked the inspiration of Him—

"Who touched Isaiah's lips with hallowed fire."

Any one, in order fully to appreciate the productions of such authors, must approximate to them in organization; and it is very easy to understand, upon Phrenological principles, why some persons take no pleasure in reading the works of the immortal poets. Shakespeare, aware of the necessity of this mutual understanding, introduces Chorus in Henry the Fifth, to request the audience to

"Think, when we talk of horses, that you see them,
Printing their proud hoofs i'the receiving earth:
For 'tis your thoughts that now must deck our kings,
Carry them here and there: jumping o'er times:
Turning the accomplishment of many years
Into an hour glass."

This propensity is very dependent upon the highest organs of intellect. Perfectiveness gives the desire to improve, but Reflection gives the ability—the talent—the necessary invention. Sometimes a very large organ of Perfectiveness is found combined with a very small intellect. The forehead may be high and wide, but shallow. In such cases the manifestations will frequently be in the highest degree eccentric and ridiculous, especially if combined with very large Approbativeness and Hopefulness. They are continually attempting more than they can perform. They lay out all their undertakings on such a large and splendid scale, that they can seldom be realized—their ideas are like monstrous and brilliant bubbles, which burst while they are coming into existence. If we read their compositions, we are entertained with a pompous array of splendid and beautiful nothings—their public discourses are mere

"Sound and fury signifying nothing."

Their very dress and manner proclaims a fantastical disposition, and every act is accompanied with a flourish.

From the preceding remarks, it will be perceived, that a genius for poetry depends principally upon the organ under consideration, but a good intellect, particularly Language and Comparison, must be combined with it, and also a fair developement of the other propensities. An organization however, which qualifies an individual to be a good poet, is by no means desirable, as it disqualifies for the common and useful pursuits of life. Poets are proverbially unfortunate in their pecuniary affairs; they have an insatiable longing after a state of perfection in every thing relating to their largest organs, which under ordinary circumstances, is unattainable; and therefore, they are seldom happy. This however, must be considered the effect of an excessive endowment of Perfectiveness, and not its legitimate offspring, when united to a well balanced mind. The true question is, what was the design of the Creator in bestowing it? and we must look for our answer among its ordinary, and not its excessive and ungoverned manifestations. It was evidently intended to raise man to the highest rank in the scale of intelligent beings, and to qualify him for the enjoyment of happiness of the very highest order.

XII. HOPEFULNESS, OR HOPE.

Old Rome consulted birds; Lorenzo, thou
 With more success the flight of Hope survey,
 Of restless Hope, forever on the wing.
 High perched o'er every thought that falcon sits,
 To fly at all that rises in her sight:
 And never stooping but to mount again
 Next moment, she betrays her aim's mistake,
 And owns her quarry lodged beyond the grave.—*Young*.

This is the propensity to act with reference to future enjoyment, and to anticipate agreeable results in doubtful cases. The agreeable feeling which proceeds from this propensity, has been called *hope*—its disagreeable affection, *disappointment*—and the feelings which are caused by its deficiency, *melancholy*. I have therefore adopted the term Hopefulness for the propensity, to distinguish it from the feeling which it produces. Dr. Gall named the organs according to the *actions* with which they were accompanied; Dr. Spurzheim named them according to the *feelings* with which they were accompanied; and considered actions as the *effects* of feelings. Now I carry the analysis still further, and consider both feelings and actions as the effects of propensities. I cannot too much insist upon the importance of making a distinction between

1. A *propensity* itself,
2. The *feelings* which it produces, and
3. The *actions* which it produces.

A propensity may exist in a dormant state, without producing either feelings or actions:—or it may be excited and produce feelings without being followed by actions:—or,

third, it may be excited and produce both feelings and actions. Having become fully satisfied of the soundness of these principles, I have taken the liberty to change the names of some of the organs, to prevent feelings and propensities from being confounded together. I make no objection to using the word *hope* to signify a *feeling* produced by the propensity under consideration; nor to the word *ideality* to signify a feeling produced by Perfectiveness; I am not inclined to dispute about mere terms, unless they lead to error; but if there is really a difference between propensities, feelings, and actions, then it is obviously necessary to modify the nomenclature accordingly. (See page 125.)

This propensity is the highest of the Ipseal Class; like the key stone of an arch, it crowns the whole—is intimately related to the whole—and contributes more than any other to human happiness. It produces this effect, by combining with the other powers, and inspiring a feeling that they will yet be gratified. In order to fully understand the nature of Hopefulness, we must bear in mind its high character, its extensive connections, its relation to the other propensities of its own Class, and of the Socials, and especially its relation to the highest Intellectuals. Every propensity is dependent upon the intellect, but the highest propensities are peculiarly dependent upon the highest Intellectuals. The lowest propensities may act effectually and perfectly without the aid of the reflectives; Alimentiveness, Destructiveness and Combaticiveness, for instance, can act vigorously, and be perfectly gratified, without reflection; the percepts are to them sufficient guides; not so the highest propensities—their very definition implies the existence of Causality, to look beyond the present. These remarks apply with great force to Perfectiveness and Hopefulness; neither of these propensities can produce the effects which they were

evidently designed to do, without the aid of reflection. I have already shown the effect of a large Perfectiveness upon a deficient intellect, and its great dependence upon Causality and Comparison; this is even more obvious in respect to Hopefulness. I cannot conceive how this propensity can act at all, until Causality has first acted. It is only by means of Causality, that we look forward to the future; we remember the past, and perceive the present, by means of the perceptives; but when, from these premises, we infer the events to come, we do so only by means of Causality. Now, when we consider that Hopefulness relates to the doubtful, the contingent, the future—that its very office is to produce feelings and actions with reference to subjects concerning which we only know in part, and believe in part, and conjecture in part, and hope the rest—we must admit that it is especially dependent upon Causality, for the very material upon which it acts. When any thing is present, or within our reach, we cannot feel any hope in relation to it; but when the result is one in which we feel a deep interest, and which, by means of Causality we perceive must happen, though it is doubtful whether the event will be favorable to us or not—then this propensity has its appropriate stimulus—produces agreeable anticipations—dismisses all forebodings—and disposes us to act as if success were certain.

The lower animals can possess no more of hope than they do of reason. They know so little of the probabilities of future events, that they can scarcely be said to hope or fear concerning it. But man has intellectual powers sufficiently capacious to store up the events of ages past, and by the light which they shed upon the future, they enable him to foresee the probable fate of generations yet unborn; without this happyfying propensity he would be inconceivably miserable and melancholy. We are not left to con-

jecture on this point; hundreds of instances have fallen under my own observation, in which a deficiency of the organ was attended with the most indescribable unhappiness. The more reflective powers such persons possess, the more melancholy it renders them; by enabling them to see difficulties, and troubles afar off; and thus exciting Cautiousness to action, while there is not sufficient hope to counteract its chilling effects. The most melancholy people that I have ever seen, had large intellect. They have the gift of showing, by the most unanswerable logic, that they are the most unfortunate beings in the world; and they recur to the miseries of the past, as data from which to infer the misfortunes of the future.

“Melancholy is a fearful gift;—
 What is it but the telescope of truth,
 Which strips the distance of its phantasies
 And brings life near in utter nakedness,
 Making the cold reality too real.”

Most of those who commit suicide, have this organ small and Destructiveness large. To them, the future holds out nothing sufficiently desirable to make life worth preserving. If Conscientiousness and Credenciveness are large, they are frequently disposed to religious melancholy, and have “a fearful looking for of judgments to come,” while the promises of the gospel afford them no consolation.

“On horror’s head, horrors accumulate,”

till nature sinks in despair beneath the intolerable load, and they rush into the arms of death in a frenzy of desperation. When the organ is but little below medium, the effect is less severe; then there is a disposition to look at the dark side of every subject, and to foresee evils which exist only in their own imagination. They are apt to think themselves cursed with *bad luck*; they not only see troubles in the future, but they call up from the recollections of the past

only the disagreeable incidents and circumstances, and dwell upon them with mournful interest. They will review their past lives and show that they have been continued scenes of misfortune. They seem to have a great faculty of recollecting disagreeable things, and forgetting those which are agreeable; and they frequently entertain their friends with a doleful account of their misfortunes. One of this kind of persons lately undertook to convince me that he was *naturally* unlucky. "Not long since," said he, "I went a fishing, and every body in the boat caught fish but me. I baited my hook just as they did—put it down into the water in the same way, close by the side of theirs—and yet caught no fish; while they hauled them in all around me; and what was most provoking, there was a kind of half fool with us, who had better luck than any of the rest." The friends of a young man once requested me to explain, upon phrenological principles, his singular conduct. He had considerable money, left him by his father, and was surrounded by rich friends, who urged him to engage in business; but he constantly refused, on account of his fears that he should not succeed. He seemed averse to all kinds of enterprise, in which the results were in any degree doubtful. I found in him a very amiable organization, but Hopefulness deficient. Although his health was tolerably good, he undertook to show to me the probability that he should die with the consumption; as several of his relatives had fallen victims to that disease, and another, whom he mentioned, would doubtless have met with the same fate, had he not been killed by lightning.

Charles the Tenth of Sweden, must have possessed a towering Hope and Firmness. Hope was Napoleon's "star," and led him on, like an ignis fatuus, first to empire and then to ruin. It was Hope and courage which dictated the celebrated remark of Julius Cæsar to the fisher-

man, when the storm threatened them with destruction—"Fear not, you carry Cæsar and his fortunes." Hope is the "good angel" which hovers around the couch of the pious, and inspires them with dreams of future glory and happiness.

"O Hope! sweet flatterer, whose delusive touch,
Sheds on the afflicted mind the balm of comfort,
Relieves the load of poverty; sustains
The captive, bending 'neath the weight of chains."

It is large in the young, and prompts them to plan with reference to futurity—to live as though they should always live, and always be prosperous—to put far away the evil day, and exclaim: "To-morrow shall be as this day, and more abundant." It sometimes bestows what is usually denominated a "flow of spirits" which nothing can repress, and which, even in its *ebb*, is above any thing like melancholy.

Those who have this organ large, are comparative strangers to feelings of melancholy; they look forward to the future with bright anticipations of happiness. If they have been unfortunate, they flatter themselves that it is all for the best—or that such *bad luck* cannot last long, but must soon turn in their favor; they call up hundreds of instances in which, under similar unfortunate circumstances, the result had proved favorable; and even let the worst happen, they still have resources of happiness. When acquisitiveness is large, they engage with confidence in hazardous speculations; and when small, they make the most of poverty—live contented, and free from care and anxiety. So long as they can enjoy the present, they "take no thought of the morrow, what they shall eat, nor what they shall drink, nor yet for their clothing what they shall put on." When they are in the greatest straits, they feel a hope that by some means, they know not exactly how, they will be

able to extricate themselves, and that all will yet be well. Actuated by these feelings, they sometimes accomplish apparent impossibilities—they will persevere in undertakings when all but themselves have become discouraged.

“ Things out of hope are compass'd oft with venturing.”

In the days of childhood we look forward to the happiness which we expect to enjoy after we have come to maturity, and when that time arrives we still have our greatest felicity in anticipation. We still

“ Bid the lovely scenes at *distance* hail!”

The brilliant treasure is always almost within our reach, but continually eludes our grasp. “ Time rolls his ceaseless course,” and as we are eagerly engaged in the pursuit, our progress is suddenly arrested by the certainty that we are on the brink of death—but even then,

“ Hope bears us through, nor leaves us when we die.”

To the sincere Christian it holds out a prospect of eternal felicity, and thus frequently makes death itself a pleasure. But the Christian religion does not produce this propensity—it is only adapted to it; for the most superstitious savage also has the same feeling: although it has not been directed by Revelation to the Heaven of Heavens, yet

“ Simple nature to his *Hope* has given,
Behind the cloud-topt hills an humbler heaven;
Some safer world in depth of wood embraced,
Some happier island in the watery waste,
Where slaves once more their native land behold,
No fiends torment, no Christians thirst for gold.”

Some persons have the organ about medium, and if, from extraordinary excitement, or disease, it is occasionally very active, it is followed by a temporary melancholy, caused by the reaction: and, in such cases, the higher the “spirits” have been raised, the lower of course will be the subsequent depression. Hope is more active in arterial, than in ve-

nous temperaments. The propensity is also peculiarly liable to be affected by the disease of the respiratory, or the digestive systems. It is a curious fact that in consumption, Hope is strong, and in dyspepsia, it is weak, and the state of this feeling is considered by physicians as one of the surest indications of the nature of the disease.

VITATIVENESS, or the Love of Life, is a propensity conjectured by some phrenologists, to exist. Dr. A. Combe suspects that its organ is at the base of the middle lobe, near the mesial line, and that it can not be discovered during life. I must confess that I can see no good reason for admitting such a distinct power. I consider the love of life to be the result of hope and reflection; and this is confirmed by the fact that suicides generally have small Hopefulness. Perhaps Sanitiveness, by giving a desire to preserve health and soundness of body, and aversion to personal injury, sometimes produces effects in animals that are mistaken for a love of life; but Sanitiveness is manifested powerfully by animals so low in the scale that they cannot be supposed to know that they enjoy life. There are doubtless, organs undiscovered, particularly at the base of the brain, which relate to the corporeal necessities; but I shall treat only of what is believed to be discovered, and leave the great field of conjecture to those who are better qualified to cultivate it.



Talleyrand.



Decatur.



Osceola.



Mrs. Rapp.



Red Jacket's wife

On stone by M.D.

LOCATION OF THE IPSEALS.

I. PNEUMATIVENESS is situated a little below and before Alimentiveness; and tends to give that square appearance to the face which will be seen upon our Indians, as in *Osceola*. and in *Red Jacket's* wife. The bones of the face render it particularly difficult to determine the size of this organ; but in extreme cases it is too apparent to be denied; and I have also verified it by post mortem examinations.

II. ALIMENTIVENESS* is just before the external orifice of the ear, and gives width to the face, so that when it is large, and Chemicality is also large, and Pneumativeness small, the face assumes the form of a wedge. It is generally large on the German emigrants that are to be seen in Buffalo, and moderate on the Yankees. Sometimes Alimentiveness and Pneumativeness are both very large, and the Intellect small, and then the bones of the face will be crowded forward and laterally outward, so as to make the face appear very large compared with the forehead; such is the case with Mrs. Rapp, and with most of the Indians.

III. SANITIVENESS produces fullness and width in the head just below Destructiveness, so as sometimes to make the ears stand out like spread wings, and when small, the ears are more parallel to the head, as in women.

IV. DESTRUCTIVENESS is just above the ear; in the brain its convolution appears to be a mere continuation of Alimentiveness. It gives width to the head, as in Armstrong and Rapp, and in carnivorous animals.

*It is difficult to decide which should be considered as first in the order of arrangement, Alimentiveness or Pneumativeness.

V. COMBATIVENESS is behind the ear, situated a little higher than Destructiveness. It is frequently confounded with the bony protuberances which are called the *mastoid process*, and the *crucial ridge* which divides the cerebellum from the cerebrum; but the organ is higher than these. (See Decatur.) Observe also, in animals, the difference in width and fullness between the ears—contrast the bulldog with the pointer, or the rabbit.

VI. SECRETIVENESS is just above Destructiveness, nearly parallel with it, and extending a little farther forward. (See Talleyrand.)

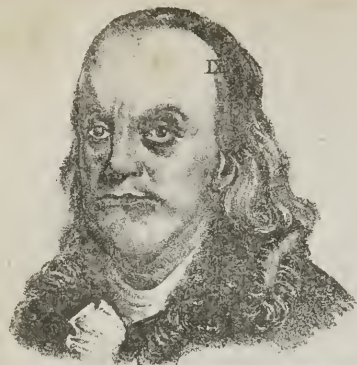
VII. CAUTIOUSNESS is easily determined, on account of its great size, and the fact that in nearly all females it presents a distinct protuberance just above Combativeness. In some persons, however, this protuberance is entirely wanting, as in Decatur, Paul Jones, and Gustavus Adolphus, and then of course the organ is small. It is easily observed on herbivorous animals.

VIII. CONSTRUCTIVENESS is above and before Alimentiveness, so as when large to give width to the lower part of the forehead, as in Hogarth, and Perkins. It may be observed on beavers and other animals of the rodentia class.

IX. ACQUISITIVENESS is above Constructiveness, and a little further back, as in Franklin.

X. PLAYFULNESS produces fullness in that part of the forehead which is before Perfectiveness, at the outside of Causality, and generally a little below it. Sometimes it combines with the upper part of Tune, in such a manner as to render it scarcely distinguishable from it. A correct idea of its location, may be obtained by inspecting the forehead of Hogarth, Franklin, Sterne, Voltaire, or Democritus.

XI. PERFECTIVENESS is situated just above and before Acquisitiveness, below Credenciveness, and before and a



Franklin



Bryant.



De Witt Clinton.



Hogarth



J. Perkins

J. Pinkney del.

little below Hopefulness. See the head of any celebrated poet, or artist, or of any man who was remarkable for a love of improvement, whether of a physical, moral, or intellectual kind. See the head of De Witt Clinton,* of Bryant, or of Shakspeare.

XII. HOPEFULNESS.—I find this organ situated a little lower than it is generally marked by practical phrenologists. It is directly above the ear, below Submissiveness, and behind Credenciveness. In passing the fingers along from Cautiousness to Perfectiveness, if Hopefulness is small and Cautiousness large, a depression will be felt at the upper front part of Cautiousness and the back part of Perfectiveness; but if large, and Cautiousness moderate, the upper part of the head will approximate in form to an egg, and be fuller in the middle. (See Talleyrand.)

*The likeness of Clinton in the plate, was copied from a miniature in the possession of Geo. W. Clinton, Esq., of Buffalo.

CHAPTER VIII.

SOCIAL PROPENSITIES.

It seems to me that no science exhibits a parallel with Phrenology, in point of harmony and connection of its elementary principles. We have seen the manner in which the Intellectual and Ipseal powers commence with the simplest forms of organization, and gradually rise, assuming higher and more complicated functions, until the summit of human knowledge and happiness is gained. The arrangement of the Socials, is, if possible, still more beautiful. I find them developed in three Groups.

FIRST—THE ESTABLISHING GROUP, the aim of which is to lay the foundations of society—

- 1st. Amativeness.
- 2d. Parentiveness.
- 3d. Inhabitiveness.
- 4th. Adhesiveness.

SECOND—THE GOVERNING GROUP, the design of which is to govern society with popularity, firmness and justice—

- 5th. Imperativeness.
- 6th. Approbateness.
- 7th. Firmness.
- 8th. Conscientiousness.

THIRD—THE CONFORMING GROUP, is designed to perfect the system of society, by obedience to government, conde-

scension and kindness to all our associates, and conformity to their manners, habits and opinions—

9th. Submissiveness.

10th. Kindness.

11th. Imitativeness.

12th. Credenciveness.

Every function of the human constitution, when properly executed, contributes to produce the happiness of the individual. To this rule there is no exception; and in this sense all the powers of the mind may be said to be *selfish* in their nature: even Kindness, a propensity which is by all phrenologists considered eminently disinterested, is in this sense as purely selfish as Acquisitiveness; since to those in whom it predominates, nothing gives so much pleasure as the opportunity and ability to gratify the feelings of others. The Creator, by a most admirable contrivance, has so framed the human mind, that man, in order to enjoy happiness himself, is compelled to promote the happiness of others. To accomplish this end, the Social propensities were bestowed; and although their operation augments the happiness of self, their *aim* is the benefit of society.

ESTABLISHING, OR DOMESTIC GROUP.

1ST. AMATIVENESS.

Be fruitful, multiply, and replenish the earth.—*Genesis*.

This is the propensity to propagate the species. There is no organ in the whole phrenological system that is of greater importance, none which has a more powerful effect upon

human character and human happiness, and none the bearings and relations of which are more extensive than this. In all animals, especial care has been taken to prevent the extinction of the race: the entire cerebellum being, so far as we know, the organ of Amativeness. In some adults it constitutes about one sixth of the whole cerebral mass, but in children it is frequently not more than one twentieth; this is the principal cause of the small size of their necks. The cerebellum does not increase much until the age of puberty, it then begins to expand, and nearly doubles in size between the ages of ten and twenty: the character during this time, undergoes a corresponding change: the opposite sex, which before were viewed without partiality, become now extremely interesting; and an indescribable charm seems to be thrown around them. Their voices are enchanting, their forms appear exquisitely lovely, and their favoring smile bewitching beyond all power of expression. Unconscious of the nature of the feeling that inspires them, they only know that their greatest bliss is in each other's society; their highest ambition to gain each other's love; and the most dreadful of all apprehensions that of bestowing their affections without a return. "Love," says the Count De Segur, "creates for us a new world, inhabited by two beings, one of which is to us the whole universe; for that being alone, do we value our wealth, our talents, and even our virtue. We prize no worth in ourselves but that which pleases this being: time seems to linger when it is absent, and fly when it is present; we experience that which *Madame de Lambert* says: 'we do not find the hours sufficiently long when we have to dedicate them to the beloved one.' But whence comes so sudden a change in the existence of the youth? What has subdued his will, tamed his boldness, overpowered him, and triumphed over his independence? Is it a being more enlightened, more virtuous, or more

powerful than himself? No! a very child in purity and power: a young female. She has no other weapon than her looks, no other power than her charms; but she has beauty, and youth imagines that whoever possesses it, is endowed with all perfection. Even wisdom yields blushing to her empire; and the wise *La Bruyere* could not refrain from saying, ‘A beautiful face is the most enchanting sight, and the sound of the voice of our beloved is the sweetest of melodies.’ ”

A large developement of this organ explains the mysterious fascination which some persons possess, who are not endowed with more than a medium share of other agreeable qualities. It explains why we often see marriages of the most opposite characters. The amiable, virtuous, and talented, united to the morose, unprincipled and ignorant, without any other cause being alledged than pure love. If warned by their friends that they are rushing to their ruin, they cling desperately to the fatal hope, that by the fabled omnipotence of love, they shall by some means, they know not exactly how, escape the threatened danger, and sail happily down the stream of life. At all events, spite of the remonstrances of friends, or even the pleadings of their own better judgment, they are determined to run the hazard of the die; and they only repent of their rashness when poverty, disgrace, and finally perhaps desertion, extinguishes the last faint embers of their expiring hopes. But still the lamp of love burns on, and the deserted one exclaims,

“With all thy faults, I love thee still.”

Or in the language of Byron,

“Though I cannot be beloved, still let me love.”

It may be objected, that this ardent attachment is not produced by Amativeness, without being combined with Adhesiveness. This is true, but neither can Adhesiveness produce this effect without Amativeness. It is Adhesiveness

that produces friendship, but it is Amativeness that directs it to the other sex. So also the admiration of beauty originates in Perfectiveness, and it is Amativeness that directs it towards the other sex—

“ And then the lover,
Sighing like furnace, with a woeful ballad
Made to his mistress' eyebrow,”

can gaze for hours upon a form which before would scarcely have attracted his attention. Milton represents Adam as exceedingly enraptured with the beauty of Eve, when first she made her appearance in Paradise:

“ So lovely fair,
That what seemed fair in all the world, seemed now
Mean, or in her summed up, in her contained,
And in her looks, which from that time infused
Sweetness into my heart, unfelt before,
And into all things from her air inspired
The spirit of love and amorous delight.

* * * * * On she came,
Led by her Heavenly Maker, though unseen,
And guided by his voice; nor uninformed
Of nuptial sanctity, and marriage rites:
Grace was in all her steps, Heaven in her eye,
In every gesture dignity and love.

* * * * Here passion first I felt,
Commotion strange! In all enjoyment else
Superior and unmoved; here only weak
Against the charm of beauty's powerful glance.”

The adaptation of Amativeness to the admiration of personal beauty, seems wisely designed to prevent the transmission of deformed and imperfect bodily organizations to posterity. It is not the effect of mere youthful fancy, but was implanted in the mind for a highly useful purpose; and therefore should be by no means discouraged; on the contrary, it seems to be of the very highest importance that it

should be properly directed; and just ideas of what constitutes beauty of constitution, should be early inculcated.— This subject teaches us, that the knowledge of the principles upon which physical and mental energy and harmony depend, cannot be too highly appreciated as a branch of education.

The organ under consideration does not come into action until the individual has arrived at years of discretion, and is capable of directing it in a proper manner. There is therefore, abundant time and opportunity, previously to prepare the minds of the young, so as effectually to avoid the natural punishment which necessarily follows the violation of the laws of hereditary descent.

The influence of Amativeness is thus shown to be powerful, and highly beneficial to social intercourse. The effects which follow its deficiency, may be observed in the peculiarities of a majority of those who have voluntarily lived unmarried beyond middle age. They are generally very particular in their choice, not looking at their companions with the partial eyes of true lovers, which can sometimes

“ See Helen’s beauty in a brow of Egypt.”

They go about their love affairs as coolly and deliberately as they would about a pecuniary arrangement; and consider matrimony rather as a means of advancing their interests, or gratifying ambition, than as the means of enjoying domestic happiness. They are often excessively prudent, formal, and ceremonious; and have the faculty of perceiving that a great many things are extremely indecorous and shocking, which others look upon with innocent indifference. They are well characterised by a single line of Burns:

“ Their greatest merit is a want of passion,”

and therefore they deserve but little credit for the command they appear to possess over their feelings. The unforgiving

spirit of censoriousness with which they frequently comment upon the errors of others, proceeds from a large Conscientiousness and Imperativeness, unbalanced by even a salutary developement of Amativeness and Kindness.

I seldom find a person possessing much energy of character, who is deficient in this propensity. It seems to give activity to Combativeness, and is generally accompanied with a large developement of that organ. Males, among all animals, manifest it in a greater degree than females; and I have seldom found it very large in females without observing at the same time an uncommon manifestation of the other masculine traits.

2D. PARENTIVENESS, OR PHILOPROGENITIVENESS.

“ My dear babe,
 Who, capable of no articulate sound,
 Mars all things with his imitative lisp,
 How he would place his hand beside his ear,
 His little hand, the small forefinger up,
 And bid us listen! And I deem it wise
 To make him Nature's Play-mate. He knows well
 The evening star; and once, when he awoke
 In most distressful mood (some inward pain
 Had made up that strange thing, an infant's dream)
 I hurried with him to our orchard plot,
 And he beheld the moon; and hushed at once,
 Suspends his sobs, and laughs most silently,
 While his fair eyes, that swam with undropt tears,
 Did glitter in the yellow moon-beam! Well
 It is a father's tale.”—*Coleridge*.

The first propensity of the Social Class, is manifested by every species of organized beings in nearly an equal degree;

but the parental instinct, of which this is the organ, is manifested so slightly by the lowest animals, as to render its existence in some of them very doubtful. Fishes take no notice of their young; the crocodile lays its eggs in the sand and leaves the sun to hatch them; the male even preys upon them, until they are grown too old and tough for him to masticate. Birds, with few exceptions, are tender of their young; but the mammalia, which are the highest class of animals, have received their name from the distinguishing peculiarity of their constitutions, that they are endowed with an additional organ for the secretion of milk to nourish their young. It is on this account that those aquatic animals that give milk, are not classed with fishes. The whale is remarkable for attachment to its offspring, and is generally peaceable, except when its young are in danger, and then it has been known to turn upon the whalers, and strike a large ship with such force as to cause it to sink in a few moments. The bear, rough as he is—and tigers, cruel and bloodthirsty beyond all other beasts of prey, are yet careful of their young, and frequently exhibit for them a fondness almost equal to that of human beings. The longer the young of animals are in arriving at maturity, the more weak and helpless their condition at birth, the more strong and active is the manifestation of maternal Parentiveness. The natural history of the dog, fox, and monkey, are illustrative of this fact. Dr. Gall first had his attention directed to this organ, by finding it large upon monkeys; and at the same time, a clergyman reminded him of the remarkable tenderness which those animals bestow upon their young. The adaptation of Parentiveness to the condition of the young, explains the well known fact, that children of imperfect health, or deformed bodies, receive from the mother a degree of tender regard, proportionate to their helplessness.

It is much the largest in the female sex—they upon whom devolves the care of raising the young, and implanting the first seeds of intelligence and virtue. Who has not felt the influence of a mother's love, and fled from the stern rebuke of an angry father, to take shelter behind the bosom of maternal indulgence? Even when compelled by a sense of duty to administer punishment, she does so with such evident reluctance as to convince the sufferer that she would gladly refrain, if she could do so consistently with her regard to the future welfare of her child. This awakens a feeling of genuine repentance, more certainly than any degree of severity would do, if inflicted in a tyrannical manner. When, however, Parentiveness is so much developed as to be ungovernable by the higher powers, the consequence is a fatal indulgence towards the child; encouraging him in vice and even in crime, which a salutary correction might have prevented, if seasonably applied.

This is certainly one of the most amiable traits in the human character; and when the organ is largely developed in a man, it gives a gentleness to his manner which renders him very agreeable to young persons. The president of a college is seldom popular, if this is small; but when large, he feels a fatherly interest in the welfare of his pupils, which manifests itself in such a manner as generally to win their Adhesiveness in return. Governors, school teachers, and all persons in situations where authority over juniors is to be exercised in a discretionary manner, need the softening influence of this propensity, to prevent them from acting with too much harshness and severity.

When the organ is very large in persons who have no children of their own, substitutes are frequently adopted; orphan children are thus sometimes better provided for than they would have been had they never lost their parents. Children that have been left by their cruel mothers to per-

ish, have frequently found in strangers the most affectionate of parents. The fondness of little misses for dolls, and the affection lavished by older ladies upon pets, such as lap-dogs, kittens, and even plants, is caused by Parentiveness, when it has no more proper object with which it can be gratified; but as soon as the care of an infant devolves upon one of them, she immediately neglects all her former pets. To those females who have the organ very large, there is a feeling of delight experienced in taking a beautiful infant into their arms, which a man who has the organ small cannot understand. I think Philoprogenitiveness too long a name, and have therefore adopted that of Parentiveness.

3D. INHABITIVENESS.

When I have gazed
 From some high eminence on goodly vales,
 And cots and villages embowered below,
 The thought would rise that all to me was strange
 Amid the scenes so fair, nor one small spot
 Where my tired mind might rest, and call it home.—*Southey*.

I consider this the propensity to fix upon some particular spot for a residence. Out of Amativeness and Parentiveness arises the necessity for Inhabitiveness. Animals that have young, and nourish them, must have a place for them to which they can regularly return from their ramblings in quest of food. Nothing can afford stronger evidence of the existence of this propensity, than the fact that migratory animals return thousands of miles to inhabit the same spot that they did the year before: in doing this, they have no

apparent motive but attachment to the place: it cannot be to find food, for they often pass other locations which are superior in this respect to their own homes: nor can it be attachment to their former companions, for they go with them and return with them. They pause not in their journey, any longer than is absolutely necessary for rest and food; and when they arrive at their former habitations, they go not beyond. In many instances, they not only return to the same country, but to the same tree, or bank, or house, and even to the same nest, repair it, re-occupy it, and defend it from intruders at the hazard of their lives. Cats are notoriously attached to places, and dogs to persons. The cat will leave all her old friends, and taking her kittens in her mouth, return several miles to her wonted residence; but the dog will leave every thing behind him, to follow his master. What kind of place shall be chosen for a "local habitation," depends upon the other powers; all other things being equal, animals generally fix upon those places which are best adapted to gratify the Corporeal Range. Some inhabit water, some land, and some both; and they seem to take to their native element by an instinctive power, over which education has no control: the duckling, though hatched by a hen, plunges into the water in spite of the parental authority, or the most earnest entreaties of the alarmed mother. I think the organ is generally larger in women than in men, although Dr. Spurzheim has expressed a different opinion. Dr. Gall found it large on animals that were fond of high places, but what he observed was probably a combination of Inhabitiveness with Imperativeness. The organ is generally small on the Indians, and large on the Negroes. The former lead a wandering life, and the latter never have; but on the contrary, when forced from home, they frequently die of nostalgia, or homesickness.

It is this which inspired the author of the "Iron bound

Bucket," and of "Home, sweet Home." Milton represents Adam as exclaiming,

"And must I leave thee, paradise!
Thee, native soil," &c.

Byron says:

"There was something in my native air,
That buoyed my spirits up."

Coleridge exclaims:

"My native land!
Filled with the thought of thee this heart was proud;
Yea, mine eyes swam with tears."

The prophet of Israel gives a forcible expression of this feeling: "When I forget thee, O Jerusalem, may my tongue cleave to the roof of my mouth, and my right hand forget her cunning."

Mr. George Combe, observing that persons who have this organ large are disposed to concentrate their minds upon particular subjects, and that those who have it small "shift from topic to topic, without regard to natural connection," has named it the organ of Concentrativeness; and gives his views at some length in his "System of Phrenology." He admits with Spurzheim, that it produces a disposition to dwell in particular localities, but thinks that Inhabitiveness is only one of the modes in which Concentrativeness manifests itself. Dr. Spurzheim, in the last edition of his work on Phrenology, makes a very able defence of Inhabitiveness, and expresses himself in decided opposition to the peculiar views of Mr. Combe. After much examination and reflection on this point, I am satisfied that Mr. Combe is correct in his *observations*, but mistaken in his *conclusions*. I can easily conceive, that an individual who is continually moving about from place to place, and changing his position, so that new scenes and objects are continually presenting themselves to his senses, and giving variety to his thoughts, will be likely to "shift from topic to topic" in

conversation. And on the other hand, a person whose Inhabitiveness is so large as to prevent him from thus continually changing his scene of operations, and who habitually fixes himself in an agreeable position, and continues to occupy it, his attention must necessarily be confined to a limited number of objects, and those must be a long time before him—the subject of contemplation when at leisure, and of occupation when at labor: his conversation being but the expression of his thoughts, would of course partake of the same continuous and concentrated character. All the productions of wandering people, are temporary and incomplete; all they do and say is characterized by a want of that degree of perfection, which can result only from long continued thought and action, with reference to one subject. I think this in part explains why the Negroes, though much inferior to the Indians in many respects, build up the institutions of society much more permanently, under the same circumstances.

In England, where every man is necessarily limited in his operations to a comparatively small circle, every kind of production—in agriculture, art, science, or literature—is of a more complete and finished character than in this country, where every thing is laid out on an extensive scale, but scarcely any thing is completed. The Englishman bestows the same amount of labor upon one acre of land, that the American does upon ten; and Washington Irving justly ridicules the Yankee for building a large house and finishing only a part. The same fault pervades almost every thing in our country; which is doubtless owing to the unsteadiness of the inhabitants in regard to their habitations; and to their not being confined within a sufficiently limited sphere. The frequent change of habitation, or the too great extension of the field of operations, produces unsteadiness and changeableness in all the habits and occupations of life,

and is very unfavorable to concentrated thought, or feeling, or action. Inhabitiveness therefore, by producing fixedness of place, contributes in a great measure to produce, though incidentally, the concentrating effect observed by Mr. Combe. The feeling produced by this propensity, has been called *amor patria*—love of country.

4TH. ADHESIVENESS.

Entreat me not to leave thee, or to return from following after thee: for whither thou goest I will go; and where thou lodgest I will lodge: thy people shall be my people, and thy God my God. Where thou diest will I die, and there will I be buried: the Lord do so to me and more also if aught but death part thee and me.—*Ruth*.

This is the propensity to become attached to individuals, and to form friendly associations. Some have attempted to explain the existence of society, by supposing that man early perceived the necessity of uniting for the mutual assistance of each other: but a reference to the natural history of animals, proves beyond all question, that it depends upon a distinct propensity. We see the very lowest animals uniting for the production of their offspring, and then leaving them to the care of Providence. Next we see the female lingering around her eggs, watching with maternal solicitude over their safety, imparting the warmth of her own body to kindle the spirit of life, and then attending to their wants until they are sufficiently advanced to provide for themselves. Each one then acts for himself without any assistance, and spends the rest of life without any permanent association with the rest of his species; bent continually upon the destruction of others, or flying in alarm to

save himself from the jaws even of his own kindred. One step higher, and we see them choosing a place of residence where the young are reared by the combined assistance of both the parents, and the whole family live together for the season, in perfect harmony. Still higher, we find them choosing their mates for life, forming themselves into large and complicated communities, and building extensive villages. Beavers, live in communities of "a hundred and fifty or two hundred, who all, at first, labor jointly in raising their great public building, and afterwards in select tribes, or companies, in making particular habitations. In this society, however numerous, perpetual peace is maintained; their union is cemented by common labors, and is perpetuated by mutual convenience, and the abundance of provisions which they amass and consume together. A simple taste, moderate appetite, and an aversion to blood and carnage, render them destitute of the ideas of rapine and war." "Each cabin has its own magazine of provisions, which is proportioned to the number of its inhabitants, who have all a common right to the store, and never pillage their neighbors. Some villages are composed of twenty or twenty-five cabins; the smallest cabins contain two, four, or six, and the largest twenty or thirty beavers. As to males and females, they are almost always equally paired." It is supposed by some, that matrimony is purely an artificial institution; but the fox, and several other animals, continue for life attached to the same mate, both male and female showing great fondness for the young. The love of their parents, which is manifested by the young of most of the higher animals, is owing to this propensity. Some species of monkeys, as soon as they are born, get upon the mother's back, embrace them around the neck, and are thus carried about, only dismounting to feed. Infants manifest a similar propensity to embrace their parents, and their mates. At that

helpless and dependent age, Adhesiveness is much more active, and the organ is considerably larger than it is afterwards, when they are capable of providing for themselves. As soon as they are at the age of puberty, and the cerebellum begins to be developed, Adhesiveness is directed to the opposite sex; so that a man will then "leave his father and mother and cleave to his wife." Attachment, in this case, has the same organ but a different object: accordingly it will be observed, that those individuals who have been most remarkable for filial affection, will (all other things equal,) afterwards manifest the most conjugal affection. Adhesiveness is much the largest in females; and this amiable trait is certainly much more strongly manifested by them, than by man. When king David was lamenting the untimely death of his friend Jonathan, the strongest language in which he could express himself, was "thy love for me was great, passing the love of woman." When poverty and disgrace and sickness have successively added to the accumulating burden of a man's sorrows, his wife is still true to her first love. Even after he has deserted himself, and become steeped in crimes of the blackest die; condemned by justice and thrown into prison; or is embittering her life by his tyranny, still how constant is her love! how powerful its hold upon her mind! She still clings to him with fondness, and in all the ardor of her soul, responds to the sentiment of Moore:

"O what was love made for, if 'tis not the same
Through joy and through sorrow, through glory and shame:
I know not, I ask not if guilt's in that heart,
I but know that I love thee whatever thou art."

GOVERNING GROUP.

5TH. IMPERATIVENESS, OR SELF-ESTEEM.

When Cæsar says, *Do this*, it is performed.—*Shakespeare.*

This is the propensity to command—to take the lead, and direct the operations of society—to assume authority over others, and expect obedience and submission. It is manifested in a greater or less degree, by all social animals. In complicated communities, it is absolutely necessary to maintain order. When a society is constituted of but one pair, the male always takes the lead. Those animals that associate in droves, or packs, always choose a leader; or rather one of the number *assumes* the command, and the rest, as if instinctively conscious of his superiority, tacitly submit to his government. The one that has proved, by his former services, that he is the strongest, bravest, and most sagacious, is generally the chief. If a stranger is introduced, he must either submit to the “powers that be,” or prove the justice of his claim to superiority, by a “*trial of battle*.” This is particularly the case with dogs, game-cocks, and cows. It is precisely the same with boys; the one who combines the most physical strength, with the most mental energy, is their leader by common consent: and if a stranger comes among them, he is ranked according to his relative powers; after having sometimes fought a dozen pitched battles to settle the difficult question, growing out of his claims to precedence. Among all classes of men and women, the same propensity, although assuming a thousand different forms and modifications, may be distinctly recognized.

We see the aspiring Cæsar, manifesting in his youth, the same ambitious qualities that distinguished him when a man. "I had rather," said he, "be the first man in yonder village, than the second in Rome." Alexander, when a mere boy, assumed the command of his father's veteran troops, and led them on to the conquest of the world. Dionysius, the tyrant, when driven into exile, turned pedagogue to gratify his ruling passion, and was again so unhappy as to find his subjects rebellious. The manner in which this propensity is manifested, depends upon circumstances, and the organization with which it is combined. Some, with low intellect, and very large Combativeness, take the lead in fighting like dogs: with the higher Intellectuals and Ipseals, they extend their operations, until like Alexander, Cæsar, or Napoleon, they aspire to universal dominion. We often see individuals manifesting this propensity in a most ridiculous manner, putting themselves forward, confidently assuming superiority, and getting themselves into conspicuous situations, while it is obvious to all but themselves, that they are miserably deficient in the qualities necessary to fill an important station. It is astonishing, to see the success which sometimes attends the ambitious efforts of men of inferior talents, when acting under the influence of Imperativeness. Others, with gigantic intellects, give way before them, astounded at their impudent pretensions, and disgusted with their egotism and ignorance. If their favorite hobby is one which is complicated and difficult to be understood, such as theology, medicine, or politics, they generally gain the ignorant over to their opinions, by the loud, confident, and imperious manner in which they assert them; and the supercilious haughtiness with which they bear themselves towards others.

The *feeling* which this propensity produces, has been denominated pride, haughtiness, and self-esteem. I have already shown the impropriety of naming the organs according

to the feelings which they produce, and it will therefore be obvious, why I have rejected the name of Self-esteem, which Dr. Spurzheim adopted for this organ. I consider self-esteem as the effect which under some circumstances, this propensity produces upon the intellect. It disposes an individual to look around upon his fellow men, and compare their power with his own; and in doubtful cases, it inclines him to decide the question of superiority in his own favor. Self-estimation therefore, is a compound intellectual process, which goes on under the influence of Imperativeness: but it seems a great error to call this the organ of Self-esteem. Imperativeness may be very active without its possessor thinking of himself at all; for instance, a military commander may, under its influence, be exercising the most arbitrary authority over his troops, without thinking of any thing but the success of his operations. Again, self-esteem is only *one* of the feelings which it produces: haughtiness—contempt—desire to command; these are feelings which originate in Imperativeness, and which are essentially different from self-esteem. If we examine the busts or portraits of all those master spirits of ages past who have assumed to dictate the operations of others; either in the cabinet, the army, the church, the bar, or the academy, we invariably find a large developement of this organ. It is frequently very active in the insane, and is liable to be separately diseased, producing the most singular exhibitions of imperiousness. Gall, Spurzheim, and Combe, mention several instances in which they have found it largely developed in such patients. I have also seen similar cases. A few years ago, an insane man escaped from his friends, and took his station upon one of the peaks of the N. Y. highlands. Assuming that he was the Deity, he began to give orders to the whole universe; he called in a loud voice, “Attention! all creation! in battalions to the right wheel! march!”

Imperativeness produces a love of independence—it loves authority too well to delegate it unnecessarily to others. It must consequently be small in the Africans and Asiatics, who permit one individual to hold despotic sway over millions; and it must also be large in the Indians, Swiss, and British, who manifest a jealousy of their rights, and an aversion to the encroachments of their rulers. Combined with Inhabitiveness it produces patriotism, such as was manifested by Washington, Adams, Kosciusko and Tell. They not only loved their country, but longed to see it independent, and its rights respected by other nations.

6TH. APPROBATIVENESS.

The Duke, great Bolingbroke,
 Mounted upon a hot and fiery steed,
 Which his aspiring rider seemed to know,
 With slow, but stately pace, kept on his course,
 While all tongues cried—"God save thee, Bolingbroke!"
 He, from one side to the other turning,
 Bare-headed, lower than his proud steed's neck,
 Bespake them thus:—"I thank you, countrymen:"
 And thus still doing, thus he passed along.—*Shakespeare.*

This is the propensity to act in such a manner as to gain the good opinions of society—to acquire popularity—applause—reputation—fame—honor—distinction. Its main design, is to render the government agreeable to the governed. It is not sufficient for one member of society to assume authority over the rest, and attempt to maintain it by superior power; but it is necessary to govern in such a manner as to please a majority; the ruler must have the esteem of

his people; his throne must be founded upon their affections; he cannot under ordinary circumstances, elevate himself above them, until he has first rendered himself popular. This propensity is therefore, *superadded to Imperativeness*, to enable the individual who aspires to direct the affairs of society, to do it in such a manner as not to give unnecessary offence. It checks the tyrant in his course, by suggesting to his mind,

“The thought of what men’s tongues will say.”

But if this organ is small, he will reply like Richard the Third:

“Well, let them say it, they can but say
I had the crown.”

The most despotic governments in the world, as well as the most republican, were originally founded upon the favor of the people. Cæsar was thrice offered a “kingly crown, which he did thrice refuse,” only because he doubted if public opinion was sufficiently ripe, for the ultimate purposes of his ambition. Cromwell could never have driven out the long parliament at the point of the bayonet, and usurped despotic power, had he not first won the approbation of his soldiers. Nor could Napoleon have mounted the Imperial throne, had he not been popular with the French army. The extent to which Imperativeness may stretch authority, depends in a great measure upon the previous success of Approbativeness: the very same acts of tyranny which Napoleon could perpetrate with impunity, would have cost a Bourbon his sceptre, and perhaps his life. Imperativeness and Approbativeness are twin organs, closely connected in the brain; and in every well balanced mind, these propensities mutually assist each other: their combined operation constitutes ambition; which, when properly regulated, is not only useful and laudable, but absolutely necessary to the well-being of society.

Every political election, affords illustrations of the influence of these two propensities. The candidate, all other things equal, who has the larger Approbativness, will get a majority of votes over one who has the larger Imperativeness. The former will be smiling, bowing, deferential and polite, will take great pains to render himself agreeable to the citizens, by assurances of his intention to advance their interests, professions of regard for their welfare, and friendly enquiries concerning their health, their families, their business, &c: great care is at the same time taken to avoid touching upon any topics calculated to rouse their prejudices; and to say nothing which, if reported, will be calculated to lower him in public estimation. He salutes his acquaintances across the street, and pays the most particular regard to all the little ceremonies that indicate respect and esteem. As soon however, as he becomes firmly seated in power, so as to be in a degree independent of those who raised him, his Approbativeness has no longer its appropriate stimulus; Imperativeness is now in the ascendant, and frequently the

“Proud man,
Clothed with a little brief authority,
Most ignorant of what he's most assured,
Plays such fantastic tricks before high heaven
As make the angels weep.”

The *feeling* which Approbativeness produces is called vanity—love of approbation, &c.

“The *proud* man,” says Dr. Gall, “is imbued with a sentiment of his own superior merit, and, from the summit of his grandeur, treats with contempt or indifference all other mortals. The *vain* man attaches the utmost importance to the opinions entertained of him by others, and seeks with eagerness to gain their approbation. The *proud* man expects that mankind will come to him and acknowledge his

merit. The *vain* man knocks at every door to draw attention towards him, and supplicates for the smallest portion of honor. The *proud* man despises those marks of distinction, which on the *vain* man confer the most perfect delight. The *proud* man is disgusted by indiscreet eulogiums. The *vain* man inhales with ecstasy the incense of flattery, although profusely offered, and by no very skilful hand."

Though Approbateness was *mainly* designed to render *government* popular, it forms numerous combinations with other propensities, and is capable of being modified by circumstances so as to manifest itself in a thousand ways that appear to have nothing to do with government; but we must not confound the original design of a propensity with its occasional manifestations under peculiar circumstances. Mr. George Combe makes the following just remarks concerning this propensity.

"There is a great difference in regard to the degree of endowment of this faculty, in different individuals. Some watch, with the most animated anxiety, every motion, and every look, and intuitively feel when we approve or disapprove. When we approve, the eye sparkles, the countenance opens, and the individual approaches us with a pleasing courtesy, expressive at once of the pleasure he has received from our approbation, and of his desire to retain it. He, on the other hand, in whom the faculty is naturally feeble, shows, by the undisturbed fixtude of his countenance, that our censure and applause are alike unimportant to him. When we censure, he stares us in the face, with indifference, or gapes in stupid wonder.

"A due endowment of this faculty is indispensable to an amiable character. It gives the desire to be agreeable to others,—it is the drill-sergeant of society, and admonishes us when we deviate too widely from the line of march of our fellows,—it induces us to suppress numberless little

manifestations of selfishness, and to restrain many peculiarities of temper and disposition, from the dread of giving offence, and therefore incurring disapprobation;—it is the but upon which wit strikes, when, by means of ridicule, it drives us from our follies. To be laughed at is worse than death to a person in whom this sentiment is strong.

“The direction in which gratification of it will be sought, will depend on the facilities with which it is combined in the individual. If the moral sentiments and intellect be vigorous, it will prompt to moral emulation and the desire of honorable fame. It animates the poet, the painter, the orator, the warrior, and the statesman. In some individuals it attains the height of a passion, and then glory is pursued at the hazard of life and every enjoyment which it affords, and fame is sought for even in the cannon’s mouth. If the lower propensities predominate, the individual may be pleased by the reputation of being the best fighter, or the greatest drinker of his circle.

“The feeling which is most commonly experienced, when this organ is large, even when favorably combined with other organs, is anxiety about what the world will think of us. A youth in whom it is powerful cannot do this thing, because every body will look at him; or cannot do the other, because the people would wonder. In older persons, it produces a fidgety anxiety about the opinions of the public, or of the circle of acquaintances who compose the public, to them. They imagine themselves continually before the public eye, and that the world is occupied with little else than weighing their motives, speculating on their conduct, and adjusting the precise point in the scale of importance and respectability at which they ought to be placed. A great portion of this feeling, however, is the mere inspiration of a very powerful Love of Approbation in their own heads. The public are too much engrossed with themselves

and their own affairs, to bestow so minute and permanent a degree of attention upon an individual. This anxiety about public opinion, when excessive, is subversive of happiness and independence. It renders the mere *dicta* of the society in which the individual moves his code of morality, religion, taste, and philosophy; and incapacitates him for upholding truth or virtue, if disowned by those whom he imagines influential or genteel. The want of philosophy of mind, allows wide scope to the aberrations of this faculty, for in the absence of well defined principles of taste and conduct, individuals of high pretensions dictate with greater facility fashions however absurd, which the herd of mankind follow.

“The distinguishing characteristics betwixt the disposition to oblige, conferred by this sentiment, and the feeling of genuine kindness, which springs from Benevolence, is, that Love of Approbation prompts us to do most for those who least require our aid; whereas Benevolence takes exactly the opposite direction.”

“When the developement of Love of Approbation is excessive, while the regulating organs are deficient, it is the cause of great unhappiness. It renders the little girl at school miserable, if her dress and the style of living of her parents be not equal to those of the parents of her associates. It overwhelms the artist, author, or public speaker, with misery, if a rival is praised in the journals in higher terms than himself. A lady is tormented at perceiving, in the possession of her acquaintance, finer dresses or equipages than her own. It excites the individual to talk of himself, his affairs, and connexions, so as to communicate to the auditor vast ideas of his greatness or goodness: in short, vanity is one form of its abuse. “Sir,” says Dr. Johnson, “Goldsmith is so much afraid of being unnoticed, that he often talks, merely lest you should forget that he is in company.” When not combined with Conscientiousness and

Benevolence, it leads to feigned professions of respect and friendship; and many manifest it by promises and invitations, never intended to be fulfilled or accepted. It, as well as Self-Esteem, prompts to the use of the first person; but its tone is that of courteous solicitation, while the *I* of Self-Esteem is presumptuous, and full of pretension."

"Philosophers and acute observers of human nature, have long distinguished betwixt Pride and Vanity, but nevertheless, no error is more frequently committed by ordinary minds than to confound them; and no mistake is more common than to imagine that beaux and belles, and all individuals very tasteful and particular about their personal appearance or equipages, are necessarily extremely conceited. A large Love of Approbation and much Ideality, joined with Individuality, which produces attention to details, and Order, will, in general, gives rise to the passion for neatness, propriety, and ornament; but such a combination, in place of producing a proud and conceited character, inspires with the very opposite disposition. I rarely see a *dandy* who is not at bottom a polite, obliging, good-natured, but probably weak individual; and it is only when large Self-Esteem is added to the combination, and which is not an indispensable ingredient in beauism, that the common opinion will be justified by the result."

"The organ is possessed by the lower animals. The dog is extremely fond of Approbation, and the horse displays the sentiment, not only in his sensibility to marks of affection, but in his spirit of emulation in the race. Dr. Gall mentions, that in the south of France, the peasants attach a "bouquet" to the mules when they have acquitted themselves well, and that the animals understand it as a mark of approbation, and feel afflicted when it is taken away."

7TH. FIRMNESS.

Sink or swim, live or die, survive or perish, I am for the Declaration. It is my living sentiment, and with the blessing of God it shall be my dying sentiment; Independence now, and Independence forever.—*Daniel Webster*.*

This is the propensity to *maintain* authority—to continue in the position, or course, which Imperativeness assumes—to persevere in resolutions which relate to social intercourse. Imperativeness aspires to establish government; Approbativeness to render it popular; and Firmness to give it permanence, fixedness, and consistency. It differs from Combativeness in being intended to benefit others, instead of conquering them. It does not attack or oppose, but only holds its own. No man can permanently establish the government of a nation, a church, or a family, who is deficient in Firmness. It is larger in men than women, and contributes more than any thing else to their universal superiority in government. We frequently see a man with small Imperativeness but powerful Firmness: he may be modest, unassuming, and even cowardly, but still manifest the greatest reluctance to yield his post. Danger, interest, or duty, may induce him to give way, but he does it with the most evident unwillingness; and returns again as soon as the difficulty is removed. It is common to see a man with very large Firmness and Combativeness, governed on ordinary occasions by his wife, and even by his children; the trouble of commanding and directing the affairs of others,

*Supposed speech of John Adams at the signing of the Declaration of Independence.

is to him greater than the pleasure; but his Imperativeness, though small, will sometimes be excited; and when he *does* take his stand he is like St. Helena in the midst of the ocean; nothing can shake his purpose. Firmness is very large in our Indians, combined with Cautiousness and Secretiveness, and accordingly they fight in a cowardly manner; but if taken prisoners, they die firmly at the stake, suffering the most cruel tortures, without uttering a word of complaint. They have been swept away before the whites, but they have never been reduced to submission, or changed in their manners, habits, or opinions. The Negro character is just the reverse: and the forms of their skulls present a striking contrast when compared with those of Indians in this region.

The characters of those who have Firmness large, combined with Imperativeness, seems to be *stereotyped*: they easily resist the influences which others bring to bear upon them: whatever notions they adopt in childhood, they are apt to hold through life; and it is therefore of the greatest importance that their first impressions are of a proper kind. If they once acquire vicious habits, it is very difficult to reform them; threats, punishment, or entreaties are often ineffectual; nothing but their own wills can change their wills; sometimes they can be *managed*, by gently falling in with them, admitting their superiority, and appearing to coincide with them, but at the same time suggesting certain ideas as worthy of their consideration, leaving the final decision entirely to their own pleasure. They should be

“Taught as though you taught them not,”

and the course of conduct which they are led to adopt, must seem to be one of their own choice. One who has reflection, Secretiveness, and Cautiousness small, and Imperativeness, Firmness, and Combativeness very large, will be headstrong, rash, impetuous, hasty and obstinate; with a great propensity to govern others, he will be incapable of

governing himself: and will be easily duped by knaves, whom he looks upon as immeasurably inferior to himself. If several persons with large Firmness are associated, the one who has it largest, and all other things equal, will have the most influence; and the rest will yield a reluctant and sullen submission. A knowledge of this principle is especially important to one who has the control of children: a child with large Firmness, will readily yield to a man who has it still larger; but will refuse, at the same time, to obey one who has Firmness small, this is one reason why women seldom can govern boys.

The *feeling* which Firmness produces, has been called determination—infatuation—obstinacy. It is common for phrenologists to speak of *perseverance* as the effect of Firmness; but every one will persevere in gratifying his predominant propensities, whether he has the organ of Firmness or not. He may be persevering in one pursuit and vacillating in another. Firmness may *conduce* to perseverance, but it does not alone produce it, except in regard to government, or in those cases where the influence of others is to be overcome. Hopefulness contributes to perseverance quite as much as Firmness, and in many instances much more. Decision of character depends principally upon Firmness, and is greatly increased by Hopefulness and Combativeness.

It is curious that Lavater, the celebrated physiologist, made the observation, that persons who were large in the region of Firmness, were remarkable for obstinacy. He also shows the skulls of several animals that are large in the same part, particularly the swine and hyena.

“The mule has become a proverbial synonyme of *obstinate*, probably because it resists ill treatment with firmness, and is not easily compelled to deviate from the path which it marks out for itself. It is, however, extremely

sure footed, and in most cases, the best judge of its own movements. ‘It is entertaining,’ says a facetious traveller, in describing a journey in the Alps, ‘to observe the prudence of these animals in making their way down the dangerous rocks. They sometimes put their heads over the edge of the precipice, and examine with anxious circumspection every possible way by which they can descend, and at length are sure to fix on that which, upon the whole, is the best. Having observed this in several instances, I laid my bridle on the neck of my mule, and allowed him take his own way, without presuming to control him in the smallest degree. This is doubtless the best method, and what I recommend to all my friends in their journey through life, when they have mules for their companions.’ ”

The organ is large in the bust of Zeno, the founder of the stoical philosophy, which teaches that a man should bear misfortune and success, pleasure and pain, with indifference. Also in Charles the Tenth of Sweeden, whose whole history is a most astonishing proof, of what can sometimes be achieved by a powerful constitution, with a predominant Firmness. Junius Brutus, who condemned his son to death for treason, has it very large, with small Parentiveness, and large Inhabitiveness. Washington, John Adams, John Q. Adams, and Jackson, have it larger than the other U. S. Presidents. It is large in Byron, and also in his wife; which accounts for the unyielding dispositions of both. It is large in nearly all irreclaimable convicts, ungovernable children, unamiable women, and tyrannical men. Like every thing else in existence, though intended for a blessing, it may be perverted to a curse.

8TH. CONSCIENTIOUSNESS.

Render unto Cæsar the things that are Cæsar's, and unto God the things that are God's.

This is the propensity to do justice—to act in such a manner as to avoid violating the rights of others. It is designed to confine the operations of each member of society within his proper sphere. The Ipseal and Social propensities which I have already explained, are calculated to bring mankind into continual intercourse; and as every one is bent on gratifying his predominant powers, it must necessarily happen, that several individuals will desire the same object at the same time. Under such circumstances, it is the province of Conscientiousness to cause a fair and *just* decision to be made between the rival claimants, and to do justice, even though self should be the greatest sufferer. It frequently disposes the strong to surrender to the weak—the actual possessor to yield voluntarily to the rightful owner. It prepares the mind to suffer pain, hunger, poverty, degradation, disappointment, and even death, rather than obtain happiness by unjust means. Conscientiousness is the sentinel which gives the alarm when self encroaches upon society. It makes a man a coward when he is conscious that he is in the wrong. It makes him unhappy in the midst of ill-gotten gains; and excites instinctively in his mind the thought that he deserves punishment. “The wicked flee when no man pursueth, but the righteous are as bold as a lion.” A man with large Conscientiousness, cannot fight bravely when he knows that he is in the wrong. This is probably owing to its intimate connection with Cautiousness

and Hopefulness; for it produces a peculiar effect upon both these propensities. When Cautiousness is large, and Hopefulness small, it excites in the mind a melancholy expectation of "judgment to come" for past transgressions. Such is the nature of Conscientiousness, that it is capable of exciting Cautiousness and depressing Hopefulness, or the contrary; these give it additional power, and enable it, when disagreeably affected, to produce the *feeling of remorse*—the most horrible of all feelings which the human mind is capable of experiencing. *Conscious integrity*, is the agreeable feeling which follows the gratification of this propensity, and nothing so prepares the mind for the enjoyment of happiness of all kinds, as this emotion. It permits the gratification of every propensity in a proper way, and only restrains their excessive manifestations. When we reflect that every excess is productive of unhappiness, we must admit that Conscientiousness combined with an enlightened intellect, by restraining the abuses of all the other propensities, and permitting their proper action, is their surest guide to happiness. Cautiousness restrains the other propensities from bringing injury upon self, and Conscientiousness prevents them from bringing injury unjustly upon others: and as injustice to others always recoils upon self, there is a peculiar propriety in Conscientiousness bordering as it does upon Cautiousness and Hopefulness. Conscientiousness was intended for the benefit of society, but the happiness of self is greatly dependent upon its proper exercise. It is to the social system what the law of attraction is to the planetary system, which not only keeps each planet in its proper orbit and maintains them all in a just relation to each other, but it gives solidity to each individual planet, and balances its constituent elements, so as to produce harmony and regularity in all its productions. Take away from the planetary system the law of gravitation, and not

only would the different worlds of which it is composed, "rush lawless through the sky, but each planet itself would be dissolved, and its constituents mingled confusedly with the general wreck of matter and the crush of worlds."

Precisely so with the laws which Conscientiousness imposes upon the social system; let them be entirely destroyed, and not only would all society run lawless through the world, but each individual would suffer a total wreck of happiness; the other social propensities without Conscientiousness, would only be so many curses—they would bring society together only to make them mutually miserable.

Let no one for a moment entertain the idea, that without conscientious conduct he can ultimately be happy. It is morally impossible: whatever his religious creed may be, or whatever system of philosophy he may adopt to satisfy his mind, the consequences will be the same; if he violates the rights of others, he will *certainly be punished*, sooner or later. It is now universally admitted, by all scientific men, that the health and strength of the body depends upon the harmony with which all its different parts perform their functions: precisely so does the well-being of society depend upon the harmony with which all its members perform their functions as social beings. The regularity of the whole depends upon the regularity of the members. If one organ in the body ceases to perform its proper functions, or performs them irregularly, the whole machine is affected, and perhaps stopped in consequence: but does not that very organ which originated the difficulty, suffer in common with the rest?

Conscientiousness is a governing propensity. None need it so much as those who make laws, and administer them. If a monarch who possesses absolute power, is deficient in this important quality, the consequences are of the most extensive and disastrous kind to society; but if an obscure

and powerless individual should lack Conscientiousness, the greatest injury would be to himself; his superiors could easily compel him to do right, even against his own inclination; or if he were refractory, he could be easily punished or secured before much mischief had been produced. A man therefore, with small Conscientiousness, may behave with propriety, when, if he had the power to do wrong with impunity, he would do so without hesitation. Washington had a very large organ of Conscientiousness, but suppose it had been small, what an immense amount of mischief might he have done. Lafayette had it large, and his whole life is an illustration of it. Napoleon had it moderate, and the consequences, both to himself and the world are incalculable. Lord Bacon, whom Pope describes as

“The greatest, wisest, meanest of mankind,”

when occupying the highest judicial station in England, was guilty of taking bribes, and notwithstanding his astonishing intellect, he fell like Lucifer from heaven, never to rise again.

Imperativeness aspires to govern society—Approbativeness to obtain their consent and favor—Firmness to render the government permanent—and Conscientiousness to render it just. No man should be elevated to an important station in government, who is deficient in this propensity; and when phrenology becomes more generally understood, I am confident that no man will receive a nomination who has not a good developement of Conscientiousness, whatever other qualifications he may possess. I know some persons who render themselves so extremely agreeable, so amiable, so kind, and intelligent, that scarcely any one is willing to admit that they are dishonest; and yet they can never be relied upon under tempting circumstances. There are many causes which may be supposed to prevent a man from openly doing intentional wrong, such are Cautiousness,

Approbateness, Secretiveness, &c., but there is only one cause to induce a man under all circumstances to do justice, and that is Conscientiousness. Mr. Combe makes the following very just remarks upon Conscientiousness:

“It produces the feeling of obligation, incumbency, right and wrong, for which we have no definite expression in the English language; just as Ideality produces the sentiment of Beauty. Justice is the result of this sentiment, acting in combination with the intellectual powers. The latter investigate the motives and consequences of actions; but, after having done so, they, of themselves, experience no emotions. In surveying human conduct, however, as soon as the intellect has thoroughly penetrated into the springs from which it proceeds, a feeling of decided approval or condemnation, distinct from all other sentiments, and from pure intellection, arises in the mind; and this is produced by the faculty of Conscientiousness.

“This faculty is of the very highest importance as a regulator of all the others. If Combateness be too active, Conscientiousness prescribes a limit to its indulgence; it permits defence, but no malicious aggression: if Acquisitiveness urge too keenly, it reminds us of the rights of others: if Benevolence tend towards profusion, this faculty issues the admonition, be just before you are generous: if Ideality aspire to its high delights, when duty requires laborious exertions in a humble sphere, Conscientiousness supplies the curb, and bids the soaring spirit stoop its wing.

“Nay, not only does it operate as a curb upon our too active desires, but as a spur to excite the faculties, when too feeble in their energy. If Benevolence be weak, Conscientiousness proclaims, in a voice of authority, that it is our DUTY to relieve the miserable;—if Acquisitiveness be too feeble to prompt to industry, this sentiment calls aloud on us to labor, that we may do justice to those around us.

From this regulating quality, Conscientiousness is an important element in constituting a practical judgment and an upright and consistent character.

“When this faculty is powerful, the individual is disposed to regulate his conduct by the nicest sentiments of justice: there is an earnestness, integrity, and directness in his manner which inspire us with confidence, and give us conviction of his integrity. Such an individual desires to act justly from the love of justice, unbiassed by fear, interest, or any sinister motive.

“The activity of this faculty takes a wider range than respect merely to the legal rights and property of others. It prompts those in whom it is strong, to do justice in judging of the conduct, the opinions, and the talents of others. Such persons are scrupulous, and as ready to condemn themselves as to find fault with others. When predominant, it leads to punctuality in keeping appointments, because it is injustice to sacrifice the time and convenience of others, in causing them to wait till our selfishness finds it agreeable to meet them. It prompts to ready payment of debts, as a piece of justice to those to whom they are due. It will not permit even a tax-collector to be sent away unsatisfied, from any cause except inability to pay; because it is injustice to him, as it is to the clerks, servants, and all others, to require them to consume their time in unnecessary attendance, for what is justly due and ought at once to be paid. It leads also to great reserve in making promises, but to much punctuality in performing them. It gives consistency to the conduct, because, when every sentiment is regulated by justice, the result is, that “daily beauty in the life” which renders the individual in the highest degree useful and respectable. It communicates a pleasing simplicity to the manners, which command the esteem, and wins the affections, of all well constituted minds.

“This sentiment is essential to the formation of a truly philosophic mind, especially in moral investigations. It produces the desire of discovering truth, the tact of recognizing it when discovered, and that perfect reliance on its invincible supremacy, which give at once dignity and peace to the mind.

“Repentance, remorse, a sense of guilt, and demerit, are consequences of this faculty, when the actions have been in opposition to its dictates. It is a mistake, however, to suppose, that great criminals are punished by the accusations of conscience; for this organ is generally deficient in men who have devoted their lives to crime, and, in consequence, they are strangers to the sentiment of remorse.”

Conscientiousness is greatly dependent upon the higher organs of intellect. It is by means of reflection that we are enabled to understand our relations to others, and Conscientiousness is affected according to the view which the intellect takes of a subject. If a person is so deficient in the intellectual organs that he is incapable of understanding his duty, Conscientiousness alone will not guide him right. It only gives the *disposition* to do justice, and not the *ability* to ascertain what constitutes it. It is only by means of the intellect that we *know* any thing. After the intellect has acquired a knowledge of all the facts in a case, which affect the rights of God or man, Conscientiousness inspires the mind with a desire to act according to justice, and respect those rights. Sometimes we see persons who, like Lord Bacon, know very well what is required of them, but are little disposed to perform it: and again we see others, who have a strong desire to do their duty, but are deplorably ignorant of it, and “need that some one should teach” them. When I visited the state prison at Auburn, N. Y. in company with several of my class, I called their attention to the general deficiency of Conscientiousness among

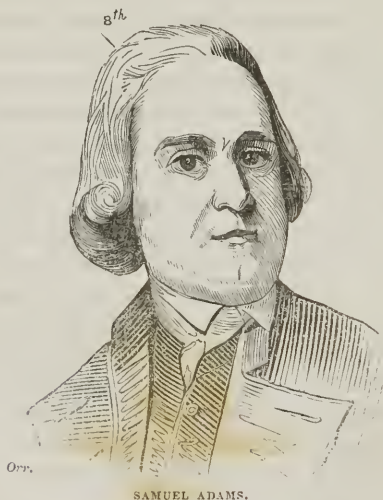
the convicts; it was in some instances so striking as to be perceptible by all of us at the distance of several rods. These unhappy men had been confined for violating the rights of others, and it might well have been expected that they would be deficient in Conscientiousness.

Conscientiousness is intimately related to Firmness. It is highly important that those who are determined to pursue a particular course, during a great length of time, which greatly affects society, should pursue a correct course. Conscientiousness is therefore superadded to Firmness to modify its effects, just as Approbativeness is superadded to Imperativeness: nothing will change the course of a stubborn man so quick, if he has this organ large, as a conviction that he is in the wrong; and on the other hand, nothing gives so much activity to Firmness, as a consciousness that our cause is just. Without Firmness, Conscientiousness is in great danger of being overcome. The virtuous resolves which Conscientiousness makes in the absence of temptation, need Firmness to carry them through under trying circumstances. Neither Firmness nor Conscientiousness can act effectually, unless they act together; and in the brain their convolutions are apparently mere continuations of each other.

It has frequently been urged as an objection to phrenology, that if men commit crimes on account of a deficiency of Conscientiousness, it is unjust to punish them; and therefore they should be set at liberty. But whatever may be the cause that prompts men to violate the rights of others, society is certainly justified in protecting itself from their outrages, whether they are idiots, criminals, or insane: and any criminal code that has for its object the safety of society and the improvement of the offender, will be in accordance with phrenological principles. I must confess, however, that nothing can be found in phrenology to justify unne-

cessary punishment. The safety of society renders it necessary that criminals should be deprived of the liberty which they have abused, and so guarded that they can do no more mischief to their fellow men; but any farther proceedings against them should be intended for their reformation and improvement. Society has no right to punish any one for revenge, or merely for an example to others. I am aware, that throughout the world the most severe inflictions are excused on the ground that they frighten others; and in some countries the most horrid cruelties are perpetrated, under the sanction of this principle. But, in the name of humanity, does not the history of man furnish already a sufficient number of examples of the consequences of iniquity? Is it necessary to keep continually before the community the example of several thousand individuals in misery, for the purpose of warning others? Does the history of the past prove that severity is the best preventive of crime? Has society any right to protect itself by such barbarous and unmerciful means as those now in use, when milder means may be made equally effective? I confidently believe, that when the sublime principles of phrenology are universally understood, the present criminal laws and criminal discipline, will undergo an important change; and the convict, instead of being treated like a beast of prey, will be managed like a moral patient. Instead of being considered a fit object for the exercise of unnecessary severity, he will be pitied as the most unhappy of mankind, and a remedy applied, adapted to the nature of the disease. While he will be secured, and every means taken to prevent him from repeating his crimes, every means will also be taken to render his situation as happy as circumstances will permit; and to restore him again to society, better qualified and disposed to respect the rights of others. According to the present system, all the state prison convicts are treated

alike, whatever may have been their offences; no allowance is made for the differences in their organization, education, or degree of intellect. Whatever may be the moral disease with which they are affected, the same remedy (severity) is applied indiscriminately to all: the consequence is, that they leave the prison in as bad, and even a worse state of mind than they entered: they are let loose again upon society—again they commit crimes—and are again incarcerated, and punished still more severely, with the same effect. In this way both the great objects of criminal jurisprudence are defeated: for neither is society protected, nor is the individual in any way improved.



Every one is aware that there is a great difference among men in regard to the ability to resist temptation; some, like Samuel Adams, and Washington, have so much Firmness and Conscientiousness as to be able to resist with

ease, and to treat with contempt, all inducements to swerve from the path of duty: while others, like Lord Bacon, Benedict Arnold, and Americus Vespucius, although possessing superior talents, fall easy victims to temptation. The portrait of Americus shows him to have been deficient in both Firmness and Conscientiousness; which accounts for the deception by which he succeeded in giving his name to the New World. Adams, on the other hand, was proof against the most tempting offers of the British crown; and, after listening to the threats and promises which the messenger was authorized to make, “assuming a determined manner, he replied: ‘I trust I have long since made my peace with the King of kings; and no personal consideration shall induce me to abandon the righteous cause of my country. Tell Governor Gage, it is the advice of Samuel Adams to him, no longer to insult the feelings of an exasperated people.’”

The great respect which beavers manifest for each other's rights, and the fact that they never pilfer from one another, cannot easily be accounted for, without supposing that they have some Conscientiousness.

CONFORMING GROUP.

9TH. SUBMISSIVENESS, OR REVERENCE.

You shall be as a father to my youth;
 My voice shall sound as you do prompt mine ear,
 And I will stoop and humble my intents
 To your well practis'd, wise directions.—*Shakespeare.*

This is the propensity to submit to the authority of those who are acknowledged to be superior; and was evidently

designed to produce obedience to government. When first discovered by Dr. Gall, it was denominated theosophy, or the disposition to worship God; because he found it large in extraordinary catholic devotees, and in others who were remarkably religious. Dr. Spurzheim, finding it large on many who made no pretensions to religion, but who were yet much disposed to reverence the great, changed the name to that of Reverence. Spurzheim says, "though devout persons have elevated heads, yet not every one who possesses the cerebral part in question is devout and religious. In all the busts and portraits of Voltaire, it is represented as much developed, and certainly he was not religious. I have also found the organ very considerable in an individual who assured me that he did not believe in the existence of God. Man, in my opinion, arrived at the belief in a Supreme Being, by means of his reflective faculties; since that is an effect without a cause. Gall first observed this organ in individuals in the act of adoring God, and saints in the exercise of devotion. My observations induce me to consider its special faculty as the sentiment of reverence in general, without determining the object to be revered, or the manner of reverence. By its agency man adores God, venerates saints, and respects persons and things." Mr. George Combe, although he named it the organ of Veneration, does not essentially differ from the views of Dr. Spurzheim.

I consider it the propensity to submit; and veneration, reverence, and respect, are *feelings* which are produced by Submissiveness: whereas worship, condescension, obedience and submission, are the *actions* which follow those feelings. In children, the parent is the proper object to excite this propensity; next the schoolmaster; and then the magistrate, the governor, the president, or the king demand obedience to their authority; and if they are endowed with wisdom,

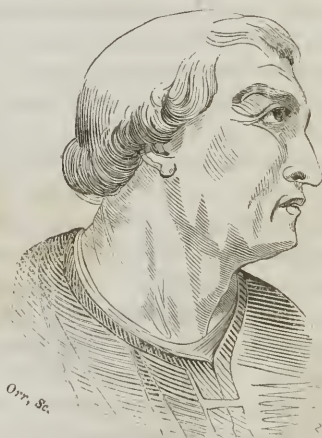
and power, and integrity, they will so affect this propensity, in all well constituted minds, as to produce the feeling of respect, reverence, veneration, modified by circumstances and by combination with other powers. Superiority of any kind, but particularly in government, is calculated to call it into action; this being the case, as soon as an individual believes in the existence of a God, of infinite attributes, this propensity will naturally be excited towards him: but it is plain, that a man will not be disposed to submit to a power, the very existence of which he denies. This explains the various observations which have been made by Gall and Spurzheim in regard to the connection between religion and this organ. A man who has large Conscientiousness and Submissiveness, will submit with great pleasure whenever he believes it to be his duty to do so; but he will readily rebel against a false religion or an unjust government, and endeavor to establish one in its place, which is congenial to all his feelings. If Submissiveness is small and Conscientiousness and Cautiousness very large, he then may submit, but he will not do so with pleasure—it will be with him a mere form, which, as soon as possible, will be dispensed with—he cannot be a devotee. He may act according to the law, because he deems it just; but he will feel little reverence for the law-giver: he will obey commands, because he approves them, and not because they emanate from one whom he reveres. In religion, morals, and government, he will insist upon the essentials, the spirit, the meaning of the rules, but will be indifferent with regard to the mere ceremonies and forms. It may at first seem contradictory, that man should possess one propensity to command, and another to obey; and it has been objected, that when both are large they will counteract each other; but let us appeal to facts: we see the same individual commanding his subordinates and inferiors with great dignity and propriety, and

maintaining his authority with firmness and decision; and yet when he comes into the presence of his superiors, his deportment is in the highest degree respectful; he obeys their just commands with alacrity and pleasure; and thus affords an example for the imitation of those below him. It is a common proverb, that those who would command, should first learn to obey.

During minority, every one is obliged to obey those who are more advanced and experienced; and this is not only necessary for the good order of society, but also for the education of the individual. If we examine the heads of those children that are disrespectful, rebellious, impudent, and ungovernable, we shall find that this organ is small, and the Governing Group, particularly Imperativeness and Firmness, large. At Auburn prison, I saw a parricide who was convicted of an attempt to murder his mother, because she would not obey him; and I found the Establishing and Conforming Groups very small, and the Governing, except Conscientiousness, very large: below is an engraving of his head.



PARRICIDE.



AMERICUS VESPUTIUS.

Let this head be contrasted with the head of Americus—of Sir Walter Scott—or of the good natured school-master, W—— H——, who was repeatedly turned out of doors by his pupils; and although a man of learning and talents, and a good teacher, he was almost totally incapable of governing his school, except by kindness.

This organ is much larger on women than men, and enables them to submit to government with a much better grace than men. It also accounts for their greater disposition to attend to the worship of God, and conform to the requisitions of the church. It explains also, why a woman can seldom love a man whom she does not respect; she takes great pleasure in looking up to her husband as her superior in power; and in feeling conscious of her dependence upon him for protection, support and influence.

One great cause of the contentment with which the southern slaves submit to their servile condition, is to be found in the fact that they have the organ of Submissiveness larger and Firmness smaller than any other race. They have always been slaves. From time immemorial, under all circumstances, the Negro has been a 'servant of servants.' The Indian, on the other hand, has always been free and independent. Neither the force nor the fraud of the whites has ever subjugated him. I have never heard of an instance in which an Indian has submitted to slavery. The southern Indians have frequently had possession of a large number of Negro slaves, but who ever heard of an Indian being a slave to a Negro? This does not, however, justify slavery; but, on the contrary, it only shows that it is taking advantage of one of the most amiable traits in the human character. I find this organ much smaller in the people of the western than the eastern part of this country, and in Americans generally than in Europeans.

There is a very great difference among animals in regard

to this propensity; the dog, although one of the most intelligent and courageous of animals, is remarkably submissive; and in this respect it differs very much from the fox; though in many other particulars he resembles that animal. All those animals which are most easily subjected to the will of man, such as horses and oxen, will be found to have this organ large; and in those that are altogether untameable, as the hyena, and wolf, both Submissiveness and Kindness will be found small.

I have adopted a name for this propensity to agree with my ideas of the distinction between propensities, feelings, and actions. Submissiveness is a *propensity*;—reverence, veneration, respect and humility are *feelings*—obedience and submission, are *actions*.

10TH. KINDNESS, OR BENEVOLENCE.

“As you would that others should do unto you, do ye even so to them.”

This is the propensity to gratify the feelings of others: to compare their feelings with our own, and to act by them, as in like circumstances we should wish them to act by us. For instance, a person with large Alimentiveness and small Aquisitiveness, knows from experience, that the feeling of hunger is distressing; and when he sees any one suffering for want of food, if he has Kindness large, will hasten to relieve him: but if he sees one who has lost his property, he does not pity him so much, because he has himself never experienced the powerful longings of Aquisitiveness. A person without Parentiveness and Adhesiveness

cannot understand the feelings of a bereaved parent, or friend; and therefore, however large his organ of Kindness may be, he cannot pity him. One who has a predominant Approbativeness, knows by experience the mortification which arises from being slandered, or lightly spoken of, and if he also has a large organ of Kindness, he will be very careful not to say any thing to mortify the Approbativeness of others. The same principle will apply to any other propensities when combined with Kindness. It has grown into a proverb that

“A fellow feeling makes us wondrous kind.”

Before we can understand the feelings of others we must experience similar ones ourselves; and then if we have this organ, we shall be able sincerely to “rejoice with those that do rejoice and weep with those that weep.”

The design of this propensity is to prevent the unnecessary injury of the feelings of others, to relieve their sufferings, and augment their happiness as much as possible, consistently with justice to self. It is not limited in its operations to any particular class of fellow beings; but its language is

“Come, send abroad a love for all that live.”

If Alimentiveness and Destructiveness desire to kill an animal for food, Kindness insists upon its being done in such a manner as to give the least possible pain. If the Governing Group produces a determination to punish rebellion, and enforce obedience, Kindness desires to have it done in the mildest manner; and if it is larger than Imperativeness and Firmness, the individual can with great difficulty exercise the necessary severity, to produce the obedience of stubborn and vicious characters. Kindness disposes its possessor to conform to the wishes of others, instead of opposing them; and to let them have their way rather than to

hurt their feelings. It is admitted by all phrenologists, that this organ is possessed by the lower animals. Mr. George Combe remarks:

“ When it is largely developed, they are mild and docile; whereas, when it is deficient, they are vicious, ill-natured, and intractable. Dr. Gall gives some interesting illustrations of this fact. The head of the tiger, says he, is more flat at this part than that of the lion; and the heads of the hyena and wolf are more depressed than that of the dog. The organ is greatly depressed immediately above the level of the eyes in the baboon; while, on the contrary, it is elevated in the ourang-outang; and the dispositions of all these animals are in accordance with their developments. In the horse, the organ is placed in the middle of the forehead, a little above the eyes. When this region is hollow and narrow, a horse is invariably vicious, and disposed to bite and to kick. In mild and good natured horses, on the contrary, this part stands as far out as the eyes, or even farther. The driver of a Cabriolet of Neuilly, says Dr. Gall, bought, at a low price, a horse which nobody could use on account of its extreme bad temper; but it was an excellent runner. In the first week it bit off two of the driver's fingers, and one of his ears. He attempted to correct it by redoubled blows, but these rendered it only more vicious. He then resolved to try the effect of gentle treatment, and this succeeded to a certain degree. The organ in question was very small in this animal; and the same conformation will be found in all horses which require to be muzzled, to prevent them from biting. On one occasion, a gentleman in the country mentioned at his dinner table that he had two horses, one extremely mild, and the other very vicious, in temper. They were brought out into the stable-yard, and by examining their heads, according to Dr. Gall's directions, I pointed out each, without having previously seen them.

The difference was so great, that several persons who were present recognized it, the moment they were told where to look for it. I have seen this experiment repeated with invariable success."

Kindness is related to the intellect, and particularly to Comparison. The very definition of this propensity, implies that the individual compares the different conditions and feelings of his fellow beings with each other and with his own: this is necessary in order to direct his kindness discreetly. Some are indiscriminate in their charities; they give their assistance to any who importune them, and make no distinction between the really needy, and the impostor. There are others again, who so economize their goodness, as to make it produce the greatest possible amount of happiness. Kindness was not designed to make the individual sacrifice his own happiness for the good of others, but was intended to be gratified *in harmony* with his other powers. It is a superadded organ, given to modify the other propensities, and not to counteract them. No man with a well constituted mind, will starve himself to feed others; or permit his family to suffer, in consequence of his generosity to strangers; but he will do all in his power to gratify others, consistently with his duty to himself and friends. I have seen several instances of individuals who were deficient in the Establishing Socials, and had a very large developement of Kindness, and small Acquisitiveness and Destructiveness. They gave away every thing, and kept themselves continually poor, and their family in want: they manifested just as much kindness to strangers, as to their best friends. Every orphan in their neighborhood, was as much befriended by them as their own children. I know a lady of this character, who gives to the poor, or sends to the heathen, every cent that her husband allows her to control. Almost every day she goes away from home, and superintends the

affairs of benevolent institutions; and is incessantly occupied in enterprizes for the benefit of others; while she neglects her own domestic duties, and even her health. There are some weak, but good-natured individuals, who render themselves really troublesome, by their well meant endeavors to be serviceable. Such persons, especially when Imperativeness is very small, and Approbativeness and Hopefulness very large, are commonly termed busy-bodies. A little flattery induces them to make themselves extremely officious in the service of any one who is disposed to make tools of them—this is the general character of the Negroes. Kindness, like every other propensity, may be so manifested as to defeat the end for which it was designed, and make its possessor appear ridiculous.

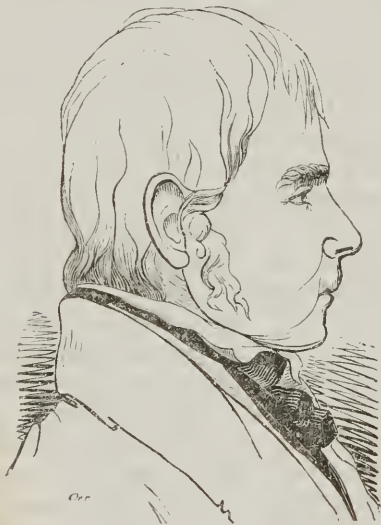
Sometimes there is an apparent contradiction exhibited by persons in whom Kindness is large, combined with large Acquisitiveness; they will not give away property, but they will give their personal services, attend the sick, show kindness in their manners, words, &c. A similar inconsistency appears in those who have Kindness with the Governing Group large; they will be kind to those who obey them, and conform to their notions; but they will be tyrannical, oppressive, and intolerant, to those who treat their authority with contempt; or who are opposed to their views of politics, religion, or morality. Again, we may see a person with large Destructiveness and Kindness, and small Acquisitiveness; he will be profuse with his property, and therefore take great credit to himself for his benevolence; but perhaps he will at the same time commit deeds of wanton cruelty. All these facts are explained on the principle, that the larger organs predominate over the smaller.

I prefer the name of Kindness for this propensity to that of Benevolence, which Dr. Gall gave it. Benevolence signifies *good actions*; it is Kindness modified by justice. The

propensity under consideration, prompts to many actions which do not deserve the name of benevolence. Gall and Spurzheim proved that it is manifested by the lower animals; now, it is undoubtedly improper to speak of a *benevolent animal*, but we can say a *kind* animal with strict truth and evident propriety.

Sir Walter Scott had the greatest developement of the Conforming organs, of any individual whose bust I have ever seen; and any one has only to read his biography by Lockhart, to be satisfied that his whole life was a continual manifestation of them.

9th. 10th.



11TH. IMITATIVENESS.

A prince's acts command the people's imitation,
Let but Augustus drink, and drunk's the Polish nation.
Frederick the Great.

This is the propensity to copy the actions of superiors—to follow the example of those whom we reverence—to adopt the manners and peculiarities of those with whom we associate. It is very active during the early years of life, before children are capable of judging of the propriety or impropriety of their acts. It enables them to avail themselves of nearly all the practical advantages of their parent's experience. A thousand little necessary arts, the nature of which it would be impossible for them to understand, are practiced instinctively under the influence of Imitativeness. The organs of both Playfulness and Imitativeness are much larger in children than adults, and they are both of very great importance in education. Man is termed by Aristotle the imitative animal. Darwin remarks, that “not only do the greatest part of mankind learn all the common arts of life by Imitation, but brute animals seem capable of acquiring knowledge with greater facility by imitating each other, than by any method by which man can teach them.” “This propensity to imitate, not only appears in the actions of children, but in all the customs and fashions of the world. Many thousands tread in the beaten paths of others, for one who traverses regions of his own discovery.”

Dr. Gall first discovered this organ in those who manifested a talent for mimicking, and he therefore named it the organ of Mimickry. Spurzheim and Combe considered it

the propensity of imitation in general. I agree with those eminent phrenologists so far as they have gone, but I do not think that they have given sufficient importance to this propensity; nor taken into account the designs of the Creator in bestowing it. They have hitherto only spoken of it as it is exhibited by mimicks, actors, artists and dramatists; but these are its extraordinary manifestations, when peculiarly combined with other powers. I consider Imitativeness a social propensity, designed to enable mankind to conform to the manners and habits of each other. It partially supplies the power of reason before reason is ripe, by enabling the young, the ignorant, and the inferior, to imitate the actions of their parents, masters, and other superiors.

Imitativeness is a *conforming* social propensity; and naturally acts in combination with Submissiveness. Although we *may* imitate those whom we do not respect, this is not the proper mode, but may be considered rather as an abuse, and a deviation from its original intention. We always direct the imitation of the young to the great and good, to those whom most we respect, and whose example we consider most worthy of imitation. In accordance with this fact is the anatomical arrangement of the convolution of this organ: it originates at Submissiveness, and runs forward parallel with Kindness, until it reaches the Reflectives. (See the bust.) Imitativeness should always be explained in connection with Submissiveness; it is a mere superaddition to it, to carry out the plan of conformity. There is also an intimate relation between Kindness and this propensity. Imitativeness disposes us to conceive the feelings of others, and Kindness is a propensity to gratify those feelings. The *feeling* of *sympathy*, in my opinion, depends principally upon Imitativeness. When explaining Kindness, I stated that in order to pity others, we must first ex-

perience similar feelings to theirs; and in order to experience similar feelings, we must possess similar organs. Kindness is superadded to the other propensities, to dispose us to *gratify* the feelings which those propensities produce; and Imitativeness is superadded, to dispose us to *understand* those feelings that we may be the better enabled to gratify them. Darwin says "imitation is *repetition*, which is the easiest kind of animal action." If this definition is correct, then this is a propensity to repeat the actions of others; and not their actions only, but their dress, and language, and mechanical performances. Now if my views are correct, sympathy is a repetition in our own minds, of the feelings of others, and depends upon this propensity. "Many young men," says Darwin, "fall sick on seeing surgical operations performed, and even feel pain in the same part of their own bodies; that is, they in some measure imitate in their own fibres, the violent actions which they witness in those of others." "The effect of this powerful agent, imitation, in the moral world, is the foundation of all our mental sympathies with the pains and pleasures of others; and is in consequence, the source of all our virtues. For in what consists our sympathies with the miseries, or with the joys of our fellow creatures, but in an involuntary excitation of ideas in some measure similar, or imitative of those which we believe to exist in the minds of the persons whom we commiserate, or congratulate?"

Sympathy, is a term which is frequently used as if it was synonymous with pity; but pity is a feeling produced by Kindness, and sympathy is a feeling produced principally by Imitativeness. As Imitativeness and Kindness naturally act together, and are generally combined with other propensities, it is sometimes difficult to distinguish which has the greatest share in producing the mingled emotions. In some late examinations which I have made of

the human brain, I found that the furrow which separates Kindness from Imitativeness, is very shallow, being not more than half an inch deep; whereas the furrow between Credenciveness and Imitativeness is more than an inch and a half. This anatomical fact coincides with these views, and explains why the two organs are so apt to act in combination, and mutually to excite each other. When explaining Kindness, I showed that it always acts in combination with one or more of the lower propensities; I now add, that it also acts, in every well balanced mind, in combination with Imitativeness; and what is commonly understood by the term sympathy, when applied to the joys and sorrows of others, is a compound feeling, produced by the united action of those two propensities. For instance, if one of our neighbors has lost his child, our Parentiveness, Kindness and Imitativeness combine to produce towards him the feeling of sympathy. If our Parentiveness is large, judging by our own experience, we conclude that he must be deeply afflicted; but *this* is not sympathy. If our Kindness is large, we pity him, and are anxious to do all in our power to console him; but neither is this sympathy. Now if our Imitativeness is large, we not only pity *him*, but we join with him in lamenting the loss of *the child*—we feel as he feels, but not so intensely. This is sympathy: *pity* is directed *towards* him, but sympathy is a feeling that mingles *with* his, and flows on in the same course: the only difference is, that his is the main current that draws the others for a time in the same direction.

A person having Imitativeness very large, with Kindness small, will be able to conceive how another feels—will, as it were, imitate or repeat imperfectly in his own mind, the feelings of others; but will have no very strong desire to gratify, or relieve them: yet this is one kind of sympathy; though not such as proceeds from a well balanced mind.

Lavater remarks, in substance, that by imitating the expression of another, we may partially experience his feelings; and I doubt not that this is true especially of those who have Imitativeness very large.

Mr. George Combe, in his *System of Phrenology*, page 512, adopts the ideas of Dr. A. Combe, on sympathy. After reading his essay carefully, I cannot help concluding, that this excellent author, had the thought been suggested to him, would have agreed with me in referring much of what has been called sympathy to the organ under consideration. Probably the idea did not occur to him, but it will be perceived on reading his remarks, that what he describes as being the effect of sympathy, is easily referable to Imitativeness, combined with other propensities; and not to any unknown "law of our constitution;" he says:

"By a law of our constitution, the natural language* of any active faculty invariably excites the same faculty to activity, and, consequently, gives rise to the same emotions, in the minds of those who witness it. The forbidding strut of great Self-Esteem, for instance, in a person whom we never saw before, addresses itself directly to our Self-Esteem; we instinctively *draw up*,† and feel moved to support our own consequence by a coldness proportioned to his. In like manner, when we meet for the first time with a person whose countenance and gestures express kindness, candor, and open-hearted friendship, which are the natural language of active Benevolence, Conscientiousness, and Adhesiveness, the same emotions are excited in ourselves, and we instinctively return his advances with a kindness corresponding to his own. Or, let us imagine that we hurry to meet a friend, whom we expect to find all happiness and gaiety, that instead of this, seriousness, anxiety, and grief,

*See remarks on Natural Language.

†Is not this obviously a combination of 5th and 11th?

are depicted on his countenance, and indicated by his gestures, these being the natural language of Cautiousness and other faculties painfully affected, will call up a corresponding affection of the same faculties in our minds, and, without knowing what has distressed him, our features and attitudes will instantly assume an expression consonant with his own. It is to this involuntary and almost unconscious communication of feelings and emotions from the mind of one individual to that of another, through the medium of natural language, that the term Sympathy is most properly applied.

“True sympathy, then, arises from the natural language of any active feeling in one individual exciting the same feeling in another, *“antecedent to any knowledge of what excited it in the person principally concerned;”* and therefore, as the stimulus of natural language is secondary or inferior in power to that derived from the direct presentment of the objects of any faculty, it is easy to explain why the person who feels sympathetically, feels less deeply than the person with whom he sympathizes. The same principle explains, also, why all men do not sympathize in the same degree, and why, in some cases, the spectator does not sympathize at all.”

“Much of the effect of example upon future character, has been ascribed to Imitation;* but although this has an influence, I am persuaded that it is small compared with that of Sympathy as now unfolded.

“There is a state of mind which has been confounded with Sympathy, but which arises from the direct excitement of the faculties, by their own objects. When we see a stroke aimed and ready to fall upon the leg or arm of another, we naturally shrink and draw back our own leg or

*This remark shows that he found it difficult to draw a line of distinction between imitation and sympathy.

arm, and when it does fall, we in some measure feel it, and are hurt by it as well as the sufferer. Dr. Adam Smith proceeds to explain this by saying, that our fellow feeling here arises from our changing places in fancy with the sufferer. Thus, if our brother is upon the rack, says he, "By the imagination we place ourselves in his situation, we conceive ourselves enduring all the same torments; we enter as it were into his body, and become in some measure the same person with him, and thence form some idea of his sensations, and even feel something, which, though weaker in degree is not altogether unlike them. His agonies thus brought home to ourselves, when we have thus adopted, and made them our own, begin at last to affect us, and we then tremble and shudder at the thought of what he feels." This theory, however, appears to be incorrect, for we often feel intensely for another's misery, without, even in idea, changing places with him. In beholding suffering, we feel deep commiseration with its object, simply because the faculty of Benevolence, the function of which is to manifest this emotion, is a primitive mental power, having the same relation to external misery or pain, as light has to the eye: and as such it is as instantly and irresistibly roused by presentment of a suffering object, as the eye is by the admission of light, or the ear by the percussion of sounds. In witnessing another's misery, we, in virtue of this constitution of mind, first feel the emotion of pity, and in proportion to its strength, fancy to ourselves the pain which he endures: But the pity always precedes, and the effort to conceive the pain is the *effect*, and not the cause of the pity. Hence those who are remarkable for a moderate endowment of Benevolence, although possessing superior intellectual or *conceiving* powers, never even try to fancy themselves placed in the situation of the sufferer, because they feel no motive impelling them to the attempt. The be-

nevolent idiot, on the other hand, with scarcely any power of conception, feels the most poignant distress.

“The same principle explains our shrinking from a blow impending over another. The feeling then experienced is a compound of Fear and Pity, Cautiousness and Benevolence. Fear sees the danger, and Pity looks to the consequent pain. Danger is the direct stimulant of Cautiousness, and suffering that of Benevolence; and, therefore, when those objects are presented to the mind, we can no more help feeling the corresponding emotions, than we can help seeing and hearing. The direct end or function of Cautiousness is the care and preservation of *self*; therefore, when it is excited by the aspect of danger, we look exclusively to *self*, and necessarily draw in our own leg or arm as parts of *ourselves*; but this results directly from the constitution of the faculty, and not from putting ourselves in the place of another. The direct end or function of Benevolence, again, is the good and happiness of *others*, and therefore, when it is excited by the misery of another, it necessarily, from its very constitution, feels for *them*, and not for us.

“An active temperament greatly conduces to sympathy producing vivacity in all the cerebral functions, but this does not supersede the laws of sympathy before explained.”

The importance of making a distinction between propensities, feelings, and actions, upon which I have so much insisted in this work, must now be obvious. Spurzheim, Combe, and all other phrenologists, agree in denominating this propensity a *feeling* of Imitation; but imitation is an *action* produced by the *propensity* of Imitativeness. It would be absurd to say ‘I *feel* imitation;’ but it is perfectly proper to say ‘I *act* in imitation;’ and it is also proper to say ‘I *feel* sympathy.’ I therefore name this the propensity of Imitativeness,—the feeling which it produces I call

sympathy,—and the actions which it produces I denominate imitations. If the term *sympathy* does not convey the precise idea of the feeling produced by Imitativeness, then I know of none in our language that does. I have, in writing this work, often felt a necessity for new terms, to express more precisely the different feelings; and I doubt not that as the science continues to progress, improvements will be introduced in this important part of the nomenclature of mental philosophy.

Those who have this organ large, are capable of conforming to the manners and habits of those with whom they associate, much more readily than those who have it moderately developed: they seem to have the power of approaching in a proper and successful manner, those who occupy eminent stations. They are more easy and graceful in their manners, and can readily adapt themselves to the feelings, actions, and situations of others. It is large in those who are capable of representing the feelings and actions of others, in writing, or speech; and no man can easily excel as an actor, orator, artist, dramatic author, ventriloquist, dancer, or musician, unless this is fairly developed. In proof of this, we find it large in the portraits, or heads, of all who are eminent in either of these professions. It gives the dramatic author the power of calling up in his own mind the same train of ideas and feeling, that he supposes the character to possess whom he describes; and having thus, as it were, imbued himself with their spirit, and made their case his own, he proceeds to pour out their feelings in language such as that of Shakspeare, Voltaire, Walter Scott, N. P. Willis, Epes Sargeant. If they are public speakers, their elocution will be graceful and appropriate; such as that of Henry Clay. If they are actors, their personations will be striking representatives of real life. If they are artists, they will copy the works of others, or nature, in such

a manner as very much to resemble the original. Imitativeness is intimately related to the intellect. The organ runs forward from Submissiveness, until it terminates in the Reflective Faculties; accordingly, we find that its operation is very much modified by the degree and manner in which the intellect is developed. If the Reflectives are large they give originality to the thoughts, they check the improper activity of Imitativeness, and give a disposition to imitate or adopt principles, instead of actions. If the Reflectives are not large, and the perceptive are much developed, then there will be a manifestation of practical, or mechanical imitation; such as is manifested by mimicks, and superficial geniuses, who can quickly learn to perform operations, the nature of which they are incapable of understanding. Those authors who are incapable of reasoning profoundly, but who can write racily and pictorially, and readily adapt their style to the subject, will invariably be found to have moderate reflectives, and large perceptive and Imitativeness. They

“Catch the manners living as they rise.”

They describe things as they see and feel and hear them, but do not attempt to account for them. Most of the writings of novelists are of this character.

I have never seen a good actor, however large his Imitativeness might be, who had not large perceptive.

This propensity sometimes combines with the other high propensities and the reflectives, and manifests itself only in a moral way, by conforming to the precepts and following the moral and religious examples of others. Such persons are apt to suppose that they should have the organ small, because they have never manifested it in a mimicking, or a mechanical way; but this common error is owing to the manner in which the propensity has been explained. Phrenologists have hitherto treated it as a peculiarity of ar-

tists, and dramatists, and have almost entirely overlooked its higher and nobler purposes, as a conforming social propensity, superadded to Submissiveness and Kindness: the fact is, the manner in which it is manifested, depends much upon the organs with which it is combined.

There are some species of animals that manifest Imitativeness very distinctly, particularly the monkey tribes; and I have found the organ plainly developed in the brains of animals, as the swine, cat, dog, horse, &c., some of which manifest it in so low a degree that we should not have suspected them of possessing it; but it is probably useful to them as a social propensity.

12TH. CREDENCIVENESS, OR MARVELLOUSNESS.

Lord I believe; help thou mine unbelief.—*Mark.*

This is the propensity to act upon the testimony of others—to give credence to the assertions, and conform to the opinions of those with whom we associate, and whom we reverence. It is intimately related to Submissiveness; and usually acts in combination with it. The convolution of the brain which constitutes this organ, originates at Submissiveness, forms a kind of elbow against Hopefulness, and runs forward to Causality. This arrangement is not without an important and obvious purpose. Although it is true that every organ in the brain is in some degree related to every other organ, yet there is a more intimate relation between some than others; and those which associate most in action will be found to be associated and arranged to-

gether in the brain. These remarks apply with peculiar force to Submissiveness, Credenciveness, and Hopefulness. We give most credence to those whom most we reverence, and our hopes are greatly modified by our belief, while both hope and faith are very dependent upon Causality.

When this organ was first discovered by Dr. Gall, it was denominated the organ of *Supernaturality*, because it was found large on those who manifested a proneness to believe in miraculous events. It seems to me that the true function of this propensity has not been properly explained; but I will proceed to give the views of Gall, Spurzheim, and Combe, and then add my own.

“Dr. Gall observed that some individuals imagine themselves to be visited by apparitions of persons dead or absent; and he asks, How does it happen, that men of considerable intellect often believe in the reality of ghosts and visions? or, Is there a particular organization, which imposes, in this form, on the human understanding? and, How are such illusions to be explained? He then enters into a historical sketch of the most remarkable instances of vision.”

“Dr. Gall remarked, in the first fanatic who fell under his observation, a large development of the part of the brain lying between the organs of Ideality and Imitation, and subsequently met with many similar instances. Dr. Jung Stilling, says he, whom he often saw with the late Grand Duke of Baden, was a tailor in his youth, then a tutor, afterwards doctor in medicine, moralist, divine, journalist, illuminatus, and visionary; and in him this part of the brain was largely developed. He believed firmly in apparitions, and wrote a book in exposition of this doctrine. In the *Maison de Detention* at Berne, Dr. Gall saw a fanatic, who believed that JESUS CHRIST, surrounded by a brilliant light, as if a million of suns had combined their splendors, had appeared to him to reveal the true religion. A gentleman,

who moves in the best society in Paris, asked Dr. Gall to examine his head. The Doctor's first remark was, "You sometimes see visions, and believe in apparitions." The gentleman started from his chair in astonishment, and said, that he *had* frequent visions; but never, up to this moment, had he spoken on the subject to any human being, through fear of being set down for being absurdly credulous. On another occasion, Dr. Gall, when he observed the development of the head of Dr. W., said, that he ought to have a strong liking for the marvellous and supernatural. "For once," replied he, "you are completely mistaken, for I have laid down the rule to believe in nothing which cannot be mathematically demonstrated." After talking with him on various scientific subjects, Dr. Gall turned the conversation towards animal magnetism, which appeared a fit topic to put the mathematical rigor of his proofs to the test. He instantly became greatly animated, assured Dr. Gall again very solemnly, that he admitted nothing as true that was not mathematically demonstrated; but added, he was convinced that a spiritual being acted in magnetism; that it operated at great distances; that no distance indeed presented an obstacle to its action, and that, on this account, it could sympathize with persons in any part of the world. "It is the same cause," continued he, which produces apparitions. Apparitions and visions are rare, no doubt, but they undoubtedly exist, and I am acquainted with the laws which regulate their production." "On this occasion," says Dr. Gall, "I thought within myself, that my inference from his developement was not so very erroneous as the worthy Doctor wished me to believe."

"A man named Halleran, of Vienna, imagined himself continually accompanied by a familiar spirit; he saw the spirit, and conversed with it. When he reached his sixtieth year, his genius appeared as if it wished to leave him,

and only on certain days of the month was he favored with his presence. At Gersbach, near Durlach, in the Grand Duchy of Baden, Dr. Gall knew a curate who was confined because he conceived himself to have a familiar spirit. At Mannheim there was a man who saw himself continually attended by several spirits: Sometimes they marched at his side in visible forms; at other times they attended him underground. In these persons Dr. Gall found the part of the brain in question largely developed. He states as questions for consideration, 'Does this convolution form part of the organ of Imitation? and, Does its extreme development exalt the talent for mimicry, to such a degree as to personify simple ideas, and to give them, thus metamorphosed, a locality, out of the individual? or, Does it constitute parts both of Ideality and Imitation? or, finally, Does it constitute a separate organ? These points can be determined only by farther researches.' "

Dr. Spurzheim observes, "There is still a sentiment which exerts a very great influence over religious conceptions, and which, in my opinion, contributes more than Veneration to religious faith. Some find all things natural, and regulated by the laws of creation; many others are amused with fictions, tales of wonder, and miraculous occurrences. They find in every passing event extraordinary and wonderful circumstances, and are constantly searching after whatever can excite admiration and astonishment. This sentiment is to be observed among mankind at large, both among savages and civilized nations. In every age, and under every sky, man has been guided and led by his credulity and superstition. The founders of all nations have had a fabulous origin ascribed to them, and in all countries miraculous traditions and marvellous stories occur in ample abundance. There are many disposed to believe in dreams, sorcery, magic, astrology, in the mystic influence

of spirits and angels, in the power of the devil, in second sight, and in miracles and incomprehensible representations of all sorts. Some, also, are disposed to have visions, and to see ghosts, demons, and phantoms. This sentiment gains credence to the true and also to the false prophet, aids superstition, but it is also essential to faith and refined religion. It is more or less active, not only in different individuals, but also in whole nations. Its functions are often disordered, constituting one species of insanity.

“The legislators of antiquity, aware of the great influence of this faculty, made frequent use of it to enforce and confirm their laws. They spoke in the name of God, of angels, or of supernatural powers. In our own days, the religious sects of Swedenborgians, Methodists, Quakers, and many others, particularly demonstrate its influence and presence. In dramatic representations, the introduction of ghosts, angels, transformations, and supernatural events, proclaims its activity both in the author, and in the public, by whom such exhibitions are relished and sought after.

“The existence of this feeling is certain. Its organ is situated anterior to Hope, and a great developement of the convolutions on which it depends, enlarges, and elevates the superior and lateral parts of the frontal bone. It is remarkably prominent in the heads of Socrates, of Torquato Tasso, Dr. Price, Young, Stilling, Wesley, &c. My observations on it are extremely numerous, and I consider it as established.”

Mr. Combe names it the organ of Wonder, and says,—
“My own observations on this organ are the following. I have met with persons excessively fond of news, which, if extravagant, were the more acceptable; prone to the expression of surprise and astonishment in ordinary discourse; deeply affected by tales of wonder; delighting in the Arabian Nights’ Entertainments, and the mysterious incidents

abounding in the Waverly Novels; and in them I have uniformly found the part of the brain in question largely developed. When the organ predominates in an individual, there is a peculiar look of Wonder, and an unconscious turning up of the exterior angles of the eye-lashes, expressive of surprise. In other persons, I have found the part of the brain in question small, and in them it was accompanied with a staid soberness of feeling, diametrically the opposite of the manifestations above described. Such individuals are annoyed by every thing new or strange; they scarcely felt or expressed surprise, and had no taste for narratives leaving the beaten track of probability or reality, and soaring into the regions of supernatural fiction. On analyzing these manifestations, they all appear to be referable to the sentiment of Wonder, an emotion which is quite distinguishable from those hitherto enumerated."

"I am disposed to infer, that the legitimate tendency of this sentiment is to inspire the mind with a longing after novelty in every thing, and that its proper effect is to stimulate to invention and improvement."

Dr. Spurzheim concludes his account of this faculty with the following remarks: "The preceding facts," says he, "determined me formerly to designate this feeling by the name of Supernaturality; and it is certain that it is *principally manifested by a belief in miraculous and supernatural circumstances*, in the foundation of religion by supernatural means, and in its dogmatical points. As, however, the feeling may be applied both to natural and supernatural events, and in every case fills the mind with amazement and surprise, I do not hesitate to change the name of Supernaturality to that of *Marvellousness*. This name I prefer to that of *Wonder*, adopted by Mr. Combe, because, according to Dr. Johnson's Dictionary, *wonder* is applicable only to surprise excited by natural objects, while *marvellousness* em-

braces both kinds of astonishment caused by natural and supernatural circumstances.”

Mr. Combe concludes: “The general function of the organ is regarded as ascertained: but its metaphysical analysis is still incomplete.”

I consider this propensity as designed, like all the others, to produce *actions*, or to *modify* actions which other propensities originate. Marvellousness and Wonder are *feelings*, which under some circumstances, precede the actions, just as pity precedes the actions produced by Kindness. In order to determine the kind of actions which Credenciveness produces, we must consider the relation which it bears to Submissiveness, and to the other propensities; and endeavor to ascertain its utility in promoting the harmonious operations of society. It is my opinion, that belief in testimony of all kinds, depends upon this propensity. Faith, belief, conviction, are its ordinary affections, when acting in combination with the intellect, upon a subject that can be understood. Wonder and marvellousness are caused by its operation when the subject is extraordinary, and not fully understood. Combined with Submissiveness, it disposes to faith in the testimony of others, on account of our respect for their characters. This principle is recognized in all courts, that the more exalted and honorable the character of the witness, the more credit is due to his testimony. The organ is much larger in children than adults, and enables them to rely with perfect confidence in the statements of their parents. Such is the constitution of their minds, that they believe the most extraordinary things upon the bare assertion of their parents or guardians. And this is necessary in order to govern and guide them, in cases where they have no experience of their own.

When explaining Hopefulness, the highest of the Ipseals, I stated that it is related to futurity through the medium of

Causality. The same is true of Credenciveness. That which is present, and subject to the test of the Senses and Lower Perceptives, cannot be a subject of belief—it is positive knowledge. But when any thing is absent, or contingent, or to come, it is then a legitimate subject for the exercise of this propensity. It is more dependent upon Causality than any of the other Socials; and is much more directly related to it. In the brain, the convolution of Credenciveness seems to go forward on purpose to join Causality. Indeed, the Reflectives can hardly be said to guide the Socials, except through the medium of this important propensity. Firmness, Submissiveness, and Conscientiousness are greatly affected by a change of belief.

Every proposition, the truth of which we cannot test by the evidence of our own senses, if it is probable, or even possible, is calculated to excite and gratify Credenciveness. But its most natural stimulus is the *testimony* of intelligent beings. I consider it as specially designed to make us act upon the testimony of others, and particularly of our superiors, in cases where we cannot have the evidence of our Senses. Impressions enter through the Senses to the Perceptives, and are analyzed, classed and connected by the Reflectives. Causality performs the last and highest process of intellect; and if the proposition is not perfectly self-evident, it becomes a matter of belief or of skepticism; that is, it becomes an appropriate stimulus for Credenciveness. This propensity is of course modified in its action according to the nature of the subject, the amount of evidence, the proportion of Credenciveness to intellect, and the effect which it is to have upon our interests, or our hopes. Whether an individual will be skeptical or credulous, depends upon the *proportion* which his intellect bears to Credenciveness and Submissiveness. Those who have very high but shallow foreheads, are apt to be foolishly credu-

lous; and those who have low and prominent foreheads, are inclined to skepticism. They wish to investigate much and believe but little. There is a third class who have foreheads wide, high and prominent—they love to believe when they can; but they cannot without proper investigation. They examine thoroughly, and believe sincerely, many controverted doctrines—they seem to take pleasure in revolving in their minds doubtful subjects, even if they cannot quite believe them. If it is something which challenges belief—if it has probability or even possibility in its favor, it is a proper subject to stimulate and delight this propensity, and produce the feeling of marvellousness. This enables us to understand the characters of novelists and romancers and dramatic authors, such as Scott, Voltaire, Shakspeare, and Tasso, who all had very high foreheads, particularly in the region of this organ and Imitativeness. Those who have been remarkable for faith upon religious subjects, have the same developement, combined with Submissiveness. Such are Bunyan, Baxter, Swedenborgh, Irving, Wesley, and hundreds with whom I am acquainted.

I consider this as one of the most important elements of a love of knowledge. The ability or the talent of *knowing*, depends upon the intellect,—but the desire, the love, the proneness to learn, depends upon the propensities. Each propensity produces a desire to know that which will be gratifying to itself. The highest gratification of Credenciveness consists in knowing what people have said or written. It is easy, therefore, to understand why those who have it large should be very fond of reading or hearing the extraordinary assertions of others, and of inquiring into their truth. If the intellect is large, they will be commonly successful in their inquiries; but if it is small they may be induced to give credence to the most absurd statements. It is this propensity that makes us love to hear or read extra-

ordinary things, even if we do not believe them. It seems as if some love to stretch their faith to its utmost, just to give it exercise;—the more marvellous the story, the better it suits them: and if Submissiveness is large, and the statement is made upon high authority, it becomes perfectly charming. This organ is larger in youth than adults, and in women than men. It accounts for the love of the marvellous manifested by children; for the pernicious novel reading habits of girls; and for the ease with which impostors of all descriptions succeed with the generality of females. I have noticed that those women who in youth read the most novels, and the least science, in maturer years are the most prone to superstition and fanaticism. They are much greater sticklers for matters of mere faith and form, than for moral and christian practice.

The exposition which I have made of this propensity, shows that it is one of very great importance in society. It is the grand lever, by means of which the few can govern the many more despotically than by any other. It is for this reason that the union of church and state is a desirable object with all despots, and adds immensely to their power.

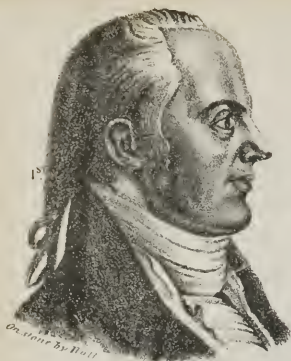
This is plainly, then, a *conforming* Social propensity; since it is the means by which children and all ignorant persons are guided. Nothing renders a man more ungovernable, or unamiable, than a disposition to doubt every thing he hears; and to rely entirely upon his own judgment and observation, instead of giving due weight to the testimony of others.

In regard to the lower animals, it is more difficult to show that they possess Credenciveness, than any of the other Socials. It is certain that they have it in a less degree than any of the others, which alone is sufficient to prove its exalted nature.

It is worthy of remark, that Hopefulness, the highest

Ipséal, and Credenciveness, the highest Social, and Causality, the highest Intellectual, are connected together at the top of the brain: and it is curious to study the relation in which these three important powers stand to each other, and to the Perceptives. The Lower and Middle Perceptives are related to that which is perceptible, present, and certain. The Reflectives, to that which is certain, but which is not present to the senses; and which is known only by deduction. Credenciveness to that which is probable, and Hopefulness to that which is possible. We may hope for that which we do not believe—we may believe what we cannot prove by reasoning; and we may prove by reasoning what we cannot test by the senses and Perceptives.

The region of perception is at the base of the brain;—of reflection, a little higher; (see bust,) of credence, in the upper part of the forehead, and hope a little farther back. In a well balanced mind, these will bear a just proportion to each other; and in making an examination, it is of the very highest importance that the relative developement of the lower and upper parts of the forehead should be compared with each other, since they have an important mutual influence. Those who have excelled in practical science have the lower predominant, and those who have excelled in fiction, the upper; while those who have avoided both extremes are balanced.



Aaron Burr.



Mrs Theodosia Burr Alston.



Peter the Great.



Emp^r Dioclesian.



Junius Brutus.

LOCATION OF THE SOCIALS.

1st. AMATIVENESS, or the Cerebellum, is so situated as to produce width and fullness in the neck, between the lower part of the ears, as in Burr, and Socrates. When large, it causes the muscles below it to appear large and full, and crowds the bones behind the ears outward, and makes them prominent. It is small in W. H. H., the good natured schoolmaster, and in children.

2d. PARENTIVENESS is just above Amativeness, in the median line; it is a large organ, and produces, when much developed, great length from the ear to the back part of the head. In many instances, it produces a large protuberance, as in W. H. H. Sometimes it combines with 3d and 4th, to give general length behind, as in Dioclesian and T. Burr.

3d. INHABITIVENESS is just above Parentiveness, in the median line. It is large, combined with Firmness, while Parentiveness is small in the head of J. Brutus, who condemned his son to death, for treason against the liberties of his country.

4th. ADHESIVENESS is at the side of 3d and above V and the lateral parts of 2d. It gives length and breadth to that part, and when 2d and 3d are small, it sometimes presents two round prominences. The whole of this Group is very large in Dioclesian, the Roman Emperor, who abdicated the throne to enjoy domestic happiness.

5th. IMPERATIVENESS is in the median line, between 3d and 7th; see Peter the Great, and contrast him with W. H. H.

6th. APPROBATIVENESS is on the side of 5th, above 4th, and gives both width and length to that part, in the same

way that 4th does below it; and when 5th is depressed, and 6th is large, it will present two distinct protuberances; but when the adjacent organs are all large, it only combines to produce general fullness in the region, as in Themistocles, the Athenian general, in Clinton, in Peter, and in Franklin. Sometimes it is considered large, compared with 5th, because the head, at that place, is more remarkable for its width, than its length in the median line. (See Perkins.)

7th. **FIRMNESS** gives height to the back of the head, in the median line, above 5th and behind 9th, as in Themistocles, Burr, Brutus, and Red Jacket's wife.

8th. **CONSCIENTIOUSNESS** is situated on the outside of 7th, and when large, gives the part a full rounded appearance, as in Aristides the Just, in Sir Matthew Hale, and in Samuel Adams. When small, and 7th large, the head falls off on each side of the median line, like a roof. When both 7th and 8th are small, the whole upper back of the head declines from 9th, as in Americus, and W. H. H. Sometimes the combination of organs adjacent to 8th will be such as to render it doubtful in what precise degree it is developed; its deficiency is frequently indicated by a slight depression, which is sensible only to minute examination; but we must not mistake a depression that is sometimes found so far from 7th and so near to VII as to allow of a good developement of 8th, between VII and 5th.

9th. **SUBMISSIVENESS** is in the median line, between 7th and 10th, at the place where the anterior fontenelle is formed in children. I find the organ to extend farther laterally than it is generally marked upon phrenological busts. In the heads of men, particularly at the West, a depression here is general; but in women, this organ is so full, and 7th so small, as to give the top of the head the regular form of the side of an egg, as in T. Burr. In Socrates this organ is very large. It is large in most Negroes, with 7th small.



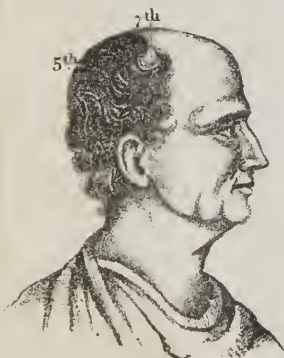
Aristides the Just.



Isocrates.



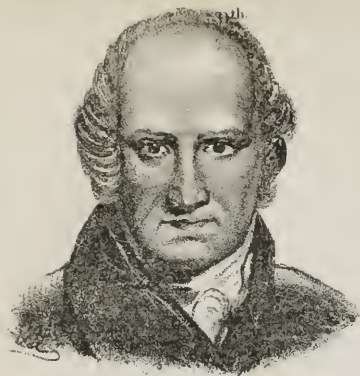
Socrates.



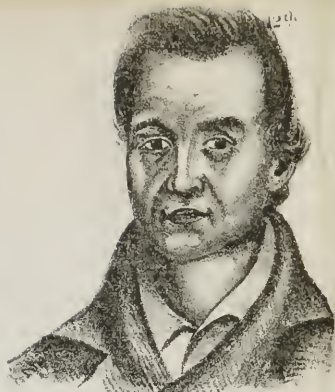
Themistocles



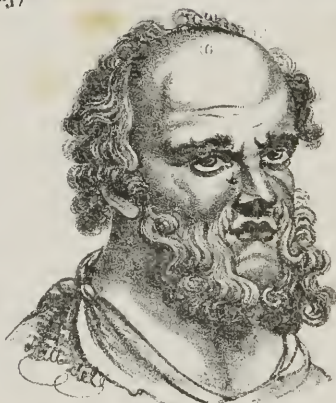
W. H. II



Benj. West



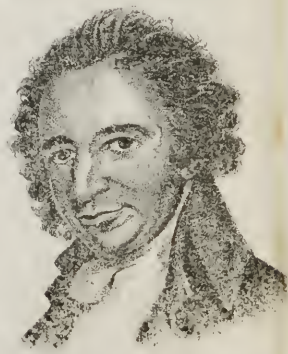
Louget.



Socrate.



David Hume



John Locke

I have found it in many of the higher animals distinctly developed, particularly in the dog and horse.

10th. KINDNESS is between 9th and 14. It gives height to the forehead above 14. Sometimes that part which is next to 9th is large, and that which is nearest to 14 is small, and sometimes the reverse is true. I have found the former oftenest in women, and the latter in men. When the front part of 10th is large, it is manifested more intellectually and deliberately than when the back part is largest; the latter act more by impulse, the former by reason—see the difference between Burr and his daughter Theodosia in this respect; contrast also the heads of Socrates, and West, and W. H. H., with the Parricide, and with Mrs. Rapp.

11th. IMITATIVENESS is situated on the side of 10th, and runs parallel with it; the convolution, (see view of the brain,) originates with 9th, and runs forward into 14 and 15; thus indicating its true and natural relation to those organs. See Socrates and West, and contrast their heads in that part with that of Red Jacket's wife, and with Mrs. Rapp.

12th. CREDENCIVENESS also originates at 9th, borders upon XII, and runs forward to 15. It gives both height and width to the upper lateral part of the forehead, before XII, above XI, and at the outside of 11th. Observe in this organ, the great contrast between the heads of Paine, Hume, and Gibbon, in whom 12th is small, and the heads of Socrates, West, and Lougel, in whom it is very large. I have observed that when the front part of 11th and 12th is much developed, and the back part but little developed, the manifestation was very different from the cases in which the back part of these organs is large, and the front part small: the latter seem to have a greater desire to know, to be curious, to inquire, to understand human nature—in short, to use these conforming social propensities in combination with the intellect; while the former are apt to act upon impulse,

to take testimony upon trust, and to sympathise ignorantly and indiscriminately. This explains why the authors, and painters, and orators, who have been most felicitous in their descriptions of human nature, have high foreheads, while those who have written best upon natural science, or excelled in the useful arts, have low foreheads; or, at least, the intellect (particularly the lowest Range,) has been greater than the high Propensities that border upon it. In examining the Socials, we should be careful to study the proportion and relation which they bear to each other; for upon this there is much more depending than has been supposed. I have found, for instance, that an individual who had 8th above medium, would be false to friends if 4th was small; whilst he would not on any account be *known* to be dishonest, or even suspected, lest his large 6th should be disagreeably affected. I also know men with moderate IX, and 4th, and large 1st, with 8th more than medium, who will be false in their professions to their female friends, and true to their mercantile friends. It is therefore obviously a task which requires an experienced and discriminating mind, to combine the developements and judge correctly of results in all cases.

In learning the location of the organs, it will be necessary to have the use of a *skull* to ascertain the bony processes, and sinuses, and sutures, that are apt to mislead the novice; and it will be still better to have access to a *collection* of skulls. A plaster-of-Paris casting of the brain, will also be very useful, to those who wish to study the science minutely. For the benefit of those who have not an opportunity to examine the brain, or its castings, I have designed, with great care, a view of the base, and of the side of the brain, (see plate 1.) showing the convolutions as I think they will generally be found in the head. Perhaps the side view is, on some accounts, preferable to any casting, or even a real

brain; as it shows the relative position of the convolutions of the brain to the face. It is also calculated to remove the common impression, that the form of the brain has no influence on the position of the bones of the face. Perhaps I may as well remark in this place, that the relative position of the *ear* and the *eye*, depends upon the degree in which the anterior lobe is developed *downward*, compared with the middle lobe; for the ear is situated at the base of the middle lobe, and the eye at the base of the frontal lobe; and if the base of one of the lobes is lower than usual, of course the relative position of the ear, the eye, and even of the nose, will be different. It is common to see persons who are unusually high from the ear to 9th and 10th, but who, notwithstanding, have low foreheads; this is owing to the fact, that the frontal lobe is not developed downward as much as usual; and in them the ear will be low compared to the eye. Is not this an important fact to practical phrenologists in estimating the comparative size of the Intellect? Is it not also worthy the attention of portrait painters?

MEASUREMENT OF THE ORGANS.

The varying thickness of the skull, and several other circumstances, render it impossible to judge with mathematical precision of the size of organs; but we can approximate sufficiently near for ordinary practical purposes. The using of numerical figures by phrenologists, has led some to suppose that the practitioner professed to be able to judge the *exact* size of an organ; but it should be understood, that those figures are used merely as convenient substitutes to

such expressions as *small, rather small, moderate, large, very large, &c.* Some practitioners make use of a scale of numbers varying from one to twenty, thus making ten a medium: others take three for a medium; and it will be perceived that it makes no difference what terms are used, if they express in an intelligible manner, the relative size of the organs as they appear in the head of the individual. I make use at present of the following scale:

EXPLANATION OF THE FIGURES USED IN EXAMINATION.

- | | |
|-------------------------|-------------------------|
| 1. Small. | 6. Rather above medium. |
| 2. Rather small. | 7. Large. |
| 3. Moderate. | 8. Very large. |
| 4. Rather below medium. | 9. Uncommonly large. |
| 5. Medium. | |

Some make use of craniometers, and callipers, with which to measure the head; and this method is useful, when the object is to collect statistical information for special purposes; but in ordinary practice, the phrenologist should judge, as the painter does, by his well practised perceptive. Some have acquired so much skill that they can, by a single glance at the head across the room, form a correct notion of the general character.

The boundaries of the organs must also be learned by experience; since the best marked bust will not be sufficient to convey this information, on account of the difference in individuals in this respect. I would state that the bust on the front page is purposely drawn in violation of the rules of perspective, in order to exhibit the organs in median line at their full size.

CHAPTER IX.

WILL—HABIT—EDUCATION.

WILL is the result of the operation of all the powers of mind that are interested in any given subject; thus, each *propensity*, when active, communicates to the *intellect* a peculiar *feeling*; this excites the powers of the mind to approve or oppose; and if the number and strength of those that approve, is greater than those that oppose, an act is permitted that relieves the feelings—and this result we call *will*. *Circumstances modify will*, change it, and even reverse it, by exciting different powers into action—thus, under the influence of 8th, 9th, and 12th. we may *will* to go to church; but the circumstance of a sudden tempest reverses the will by exciting I and VII; if now a messenger arrives with the report that the lightning has struck the church, and injured the pastor, the Socials will be so much roused as to overcome the Ipseals, and the will is changed again.

Education modifies will; but this is properly included under the head of *circumstances*: an individual who has been educated among the Seminole Indians will be likely to have a different will, on many subjects, from one who has been educated among the Turks.

Difference in organization will cause a difference in will, under the same circumstances, with the same education, and with precisely the same amount of knowledge of the subject in question. Thus, a man with large IX, and small 8th and

10th, *wills* to rob his neighbor; while another with large 8th and 10th, and small IX, generously *wills* to repair the loss from his own pocket. The criminal *wills* to violate the law, and the magistrate *wills* to punish him. One infant habitually *wills* to kick and scratch, while its twin brother *wills* to laugh and play.

The old school of philosophers have attempted to account for most of these differences, by attributing them to *HABIT*; but this is the *result* of organization and circumstances, and not the *cause*. Man does not have legs because he is in the habit of walking, but he is in the habit of walking because he has legs. The same is true of his mind; he never would contract the habit of constructing, unless he first had an organ of Constructiveness; nor of reasoning, unless he had the organ of Causality; but having these organs, the influence of habit and education upon them is acknowledged; and its importance insisted on by all good phrenologists.

EDUCATION is the cultivation of the powers which are inherent in the constitution, with a view to their improvement; and it is only upon phrenological principles, that it can be properly conducted. My own observations agree with the testimony of all phrenologists, that the proper exercise of any organ tends to increase its size and its power. This is universally admitted to be true of the *bodily* organs, and it is fair to infer, from analogy, that the same is true of the *mental* organs. But I am satisfied that exercise and excitement have much *more* effect upon the brain to increase its size, than upon any of the bodily organs. I arrive at this conclusion in the following manner:

1. The brain is the most delicate in its structure of all the organs in the constitution.

2. It is well known, that when any part of the constitution is excited, the blood immediately rushes to it; and the quantity of blood which it receives, is in proportion to the

degree of excitement and exercise which the organ receives.

3. The amount of blood which the brain receives, is several times greater than that of any other organ in the constitution, of equal bulk.

4. When the mind is unusually exercised, an uncommon quantity of blood enters the brain, distends its vessels, and stimulates and nourishes its organs, in proportion to their increased necessities.

5. It has been proved, by actual observation of the uncovered brain, during life, that the blood vessels become fuller during mental excitement.

From all these facts, I think I may safely conclude, that the habitual exercise of the organs of the mind, has a greater effect in increasing their size and power, than any other organs in the human constitution. What is true of the *whole brain* must be true of *each organ* of which it is composed—the organ which is most exercised, will ultimately become the largest, and consequently, (for size is a measure of power) it will be the most powerful. Hence the vast importance of phrenology in education, since it enables us to know the organ, or combination of organs, that need the most exercise.

Some are inclined to doubt, that exercise increases the size of the cerebral organs, because it is not sufficiently perceptible to their senses; but experiments have been made, by taking casts of the head at different periods, which establish it beyond a doubt. It is my opinion, that the variety in the heads of the different races of mankind, is owing to the various kinds and degrees of exercise which the different organs of the mind have received; and although the change during one generation was scarcely perceptible, it has finally amounted to the difference which actually exists between the Negro, the Indian and the Caucasian.

COMBINATION OF ORGANS.

If an Ipseal sometimes acts for the benefit of society, it is because it is controlled by one or more of the Socials; and if a Social appears to act for the benefit of self alone, it is because it is controlled by one or more of the Ipseals. Thus, if a man has a very large IX, and small 4th and 8th, he may marry for money; but in such a case the Ipseal controls the Social feelings, and presses them into the service by superior force. The same is true when a Social controls an Ipseal—when a man accumulates property to gratify others, his IX will be found smaller than his 6th and 10th. This explains away an objection which has been made to my classification—that the Socials sometimes act for self, and the Ipseals sometimes for society; and that therefore, there is no philosophical ground for a distinction between Ipseals and Socials: but in every instance in which an Ipseal acts for society, it will be found that it does so in consequence of the superior influence of one or more of the Socials. The self-relative nature of X, XI, and XII, is not so obvious, to some, as the other Ipseals, but they can, notwithstanding, be shown to be as really self-relative as any of this class;—the reason why they do not appear so selfish is because their objects are higher, and nobler, and more refined. It will be found that they never act for society, unless influenced to do so by the Socials: for instance, X was intended for the benefit of self; but if 4th is large, the sport will be enjoyed in society. The same is true of XI and XII. It would require several volumes to detail minutely, the results of all the different combinations which the organs may form; I shall therefore leave this subject to the judgment of the philosophical student.

CHAPTER X.

PHRENO-PHYSIOGNOMY.

UNDER this head I include, all the appearances of the *body and face*, which indicate character by reason of their harmony with the Phrenological Organs. The bodies, limbs, and features of animals, are always perfectly adapted to their several dispositions and capacities. If two animals differ in character, there is always a corresponding difference in their external appearances. The aspect of a tiger is never found connected with the disposition of a lamb; nor the disposition of the vulture, in the form of the dove.—There is always an adaptation of the mental powers of animals to their external organs;—there is harmony between the brain, in which the actions originate, and the limbs, claws, teeth, and other instruments of action. No animal possesses a large organ of Destructiveness, without being furnished also with some appropriate apparatus, with which to execute the wishes of the propensity. It is upon this principle that the classification of animals by naturalists is founded.

Animals are divided by naturalists into two grand divisions—the *vertebrated*, or those which have a back bone—and the *invertebrated*, or those which are without a back bone.

The *vertebrated* animals are subdivided into fishes, reptiles, birds, and mammalia.

The *mammalia* is the highest class of animals. At the head of this class is *man*; next, the ape and monkey tribes; and then the various quadrupeds, which are subdivided into several genera and species, for a more particular account of which I refer the student to the proper works on Natural History. But the most important subdivision of the *mammalia*, are those which are founded upon the forms of their teeth, as indicative of their different modes of procuring food.

The teeth of animals are of three kinds; the *incisors*, or cutting teeth, in front; the *molares*, or grinding teeth, in the back of the mouth; and the *canine*, or tearing teeth, between the incisors and molares.

Carniverous, herbiverous, and rodentia animals are easily distinguished from each other by the difference in their teeth. In the carniverous, the *canine* teeth predominate; as may be seen in plate VIII. fig. 1, (lower jaw of a tiger,) in which the canine teeth *b*, are large and pointed, and the incisors, *a*, are short and sharp, and arranged in a straight row between the canine. Fig. 2, head of a lion, represents the same idea.

In the herbiverous animals, (fig. 5 and 6, the horse,) the *molares* predominate, the canine teeth are wanting, and the incisors *a*, are large, and standing outward; whereas the incisors of the *carnivora* are either perpendicular, or standing inward. The herbiverous teeth are also arranged more in the form of a crescent, instead of being arranged straight across, like those of the lion. The *jaws* of the herbivora are comparatively longer and narrower than those of the *carnivora*, which are short, and at the place where the canine teeth *a*, are situated, are larger.

In the rodentia, (fig. 9 and 10, the beaver,) the *incisors* predominate; and it is from this peculiarity that they have derived their appellation of *rodentia* or *gnawers*. In these, the canine *b*, are wanting, and the two incisors *a*, assume

Fig. 1



Tiger's under Jaw

Fig. 5



Horse's Skull

Fig. 9



Beaver's Skull

Fig. 2



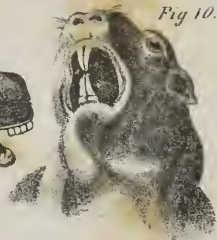
Young Lion.

Fig. 6



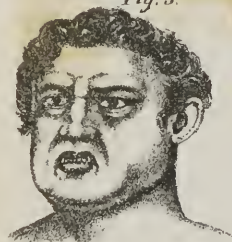
Horse.

Fig. 10.



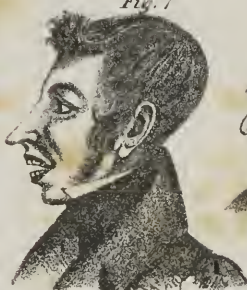
Beaver.

Fig. 3.



Ruffian.

Fig. 7



Mr P.

Fig. 11.



Mr. C.

Fig. 4.



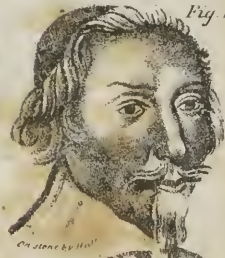
Henry VIII

Fig. 8



Fox

Fig. 12.



Richelieu

a peculiar long projecting form. The form of the jaw of the rodentia is also peculiar, reducing the chin to almost nothing, by the sloping manner in which the lower teeth extend from the under jaw to meet the upper teeth. In the carnivora, particularly in the bull-dog, the under jaw projects in front beyond the incisive teeth.

Comparative Phrenology has proved that those animals which have a predominance of the canine teeth (as all carnivorous animals do) have also a predominance of the organ of Destructiveness. Those which have a predominance of the molares, and lack the canine teeth, (this is the case with all herbivorous animals,) have the organ of Cautiousness predominating over Destructiveness. Those, again, which have the incisive teeth predominant, as the beaver, rat, squirrel, and all the rodentia tribe,—have the organs of Constructiveness and Acquisitiveness predominant.

I now come to the application of this subject to mankind. In a man of balanced and perfect cerebral organization, the three kinds of teeth, the molares, the canine, and the incisors, will be in harmony; they will approximate in their general form and arrangement, to the carnivorous, the herbivorous, and the rodentia; but they will not bear a very striking resemblance to either class of animals;—they will be formed and arranged in that beautiful manner which is *peculiarly human*.

I have already explained in another place, that man has all the Ipseal Propensities which are possessed by the lower animals, with the addition of another and higher Range. Every man has the Carniverous, the Herbiverous, and the Rodentia Ranges; but in some men the Carniverous Range predominates considerably over all the other Ipseals; and in others the Rodentia Range is most developed. Those persons (Plate VIII, fig. 3 and 4,) who have the Carniverous Range very large, have also carnivorous teeth; that is, their

teeth approximate in form and arrangement to those of carnivorous animals. They have the same short, broad jaw, and in every particular the jaws and teeth resemble those of the carnivora. The portraits of Henry VIII of England, of Nero, of Bishop Bonner, of Luther, of Vittellius the Roman Emperor, and indeed of all men of destructive character, have this form of jaw and teeth. Melaneton, Henry VI, Richard II, and other gentle characters, have more slender jaws and a less offensive kind of teeth.

Those men (Fig. 5, 6 and 7,) who have the Herbivorous Range of Ipseals, very much developed, with the Offensive Range very deficient, will most generally be found to have the long slender jaw, and large incisive teeth of the herbivorous animals; the teeth and jaws will resemble those of the horse. Those men (Fig. 9, 10 and 11,) who have the Rodentia Range very large and predominant, will have the two front incisive teeth long, and the jaw narrow on each side of them; the canine teeth being small, and the chin less prominent than those who have the carnivorous teeth predominant; indeed the whole physiognomy will be found to resemble the rat, and the beaver. This whole doctrine may be expressed in the single proposition, that *a man who has the propensities which characterize a class of animals, will also have a form of face approximating to theirs.*

In order to test this fairly, we should take extreme cases of the different classes of men, and compare them together; take, for instance, a notorious miser, who has the organ of Acquisitiveness very large, and who is deficient in the Carnivorous Range, a mean, cowardly character; and contrast his face, and jaws, and teeth, with those of a ruffian, who is reckless alike of property, of danger, and of life. Then compare both of these with one who has neither the Carnivorous nor the Rodentia Propensities large, but who has a long narrow head and jaw like a horse or deer. In

this way any one may soon be satisfied, that this principle is correct, and founded in nature. It is a most curious and interesting result, to which I have been gradually led, by the discovery of the true and natural classification of the Phrenological Organs.

There are many men who have such a compound of qualities as to render it difficult to say to which of these three classes of animals they bear the most resemblance; and this same mixture will be found in some animals; the fox, for instance, combines the cunning, the carnivorous, and the herbivorous, and I have often been struck with the resemblance in the physiognomy of the fox, to some cunning characters with whom I have been acquainted. The jaws, slender and pointed, indicating a combination of the carnivorous and herbivorous—of ferocity and weakness. Compare the face of Godoi, the prince of peace, and the artful and sanguinary Richelieu, with the face of a fox, and see if there is no resemblance.

My success in these observations, led me to extend them further, and notice the resemblance of men to animals in other particulars; and I find that the same general principle is equally applicable to other features besides the jaws and teeth. Timid men have ears which resemble those of timid animals; and destructive men have ears formed like those of destructive animals; secretive, prowling men, have eyes large, round, and placed laterally, like those of cats, and owls, and other nocturnal, prowling animals. Those who have large Pneumativeness and large lungs, have expanded nostrils. Those persons who approximate in bodily form to the carnivorous animals, are naturally more fond of meat; and those who approximate in bodily form to the herbivorous, are more fond of vegetable food; the latter are comparatively larger in the region of the pelvis and abdomen than the former.

NATURAL LANGUAGE.



Each propensity produces a kind of actions peculiar to itself; and those actions are its natural language. Every voluntary act, therefore, is the natural language of some propensity, or of some combination of propensities. When one propensity—Destructiveness for instance—acts singly, and powerfully, it draws the muscles and limbs into certain positions. Every time this propensity is excited, it produces the same effect—the movements, and the positions, and the sounds which it produces, are always essentially the same; and therefore it becomes the sign or language of that propensity. Thus, when we look at a tiger, a dog, or any other carnivorous animal, and see him drawing down the muscles at the corners of his mouth, in such a manner as to expose his canine teeth; we consider it a *sign* that he is angry—that his Destructiveness is roused. If we look at a beaver, and perceive that he is sitting near a piece of wood, with his muscles drawn up so as to expose his incisive teeth, we consider it a sign that his Constructiveness and Acquisitiveness are active. If we look at a man, and see him drawing the corners of his mouth down in a similar manner to the tiger, we have found by experience that it is a sign of the same propensity—he is angry. If we see a man who *habitually* assumes a ferocious or carnivorous expression, we infer that he is a severe character, because we see the sign stamped upon his face. Take a view of a ferocious animal, and observe the angle formed by the line of his closed mouth, and contrast it with the straight line formed by

the mouth of the peaceable animal. The same difference will be seen by comparing the mouths of ferocious and of peaceable men. Observe the manner in which the rat, the squirrel, or the beaver draw up the muscles of the mouth towards the nose, so as to expose the upper front teeth;—you will see the same expression in the extreme miser. Observe the manner in which the proud horse, or dog, or peacock, elevates his head, when he assumes superiority;—you may see the same among men. Listen also to the hoarse voice of the destructive animal; or the sudden, loud barking of the combative animal; and you may hear the same kind of sound from the *man* who is similarly excited.

But one of the most striking and yet unaccountable facts in natural language, is, that *the head moves in the direction of the organ which is excited*; for instance, if an organ in the side of the head is excited, the head moves from side to side. If the organ is in the back of the head, it moves backward;—if in the upper back, 7th for instance, the head moves up and down, decidedly;—if in the upper front, 12th for example, the head is thrown upward. In reflection it is thrown forward;—in VI and VII it is moved alternately from side to side, in the direction of the organ. In all these movements, the muscles of the face harmonize; moving upwards when the higher powers are excited, and downwards when the lower are active. The tone of voice, is also in harmony—the lower powers being generally accompanied with low, and the higher with high tones. It is impossible in any written description, to do justice to this subject, but it enables a lecturer, who has large 11th, 6th and X, to amuse and instruct a popular audience, by representing the different manifestations of each propensity; and I have often seen skeptics convinced of the truth of phrenology, by a single lecture on Phreno-Physiognomy and Natural Language.

It is now easy to understand the principles upon which physiognomy is founded; and we can also perceive, that before the discovery of Phrenology, it was impossible to reduce Physiognomy to a science. The efforts of Aristotle, of Theophrastus, of Lavater, and of Camper, were confined to the observation of the external features, while they were entirely ignorant of the functions of the brain—the great fountain of volition. Instead, however, of joining with some phrenologists, in speaking contemptuously of their labors, I acknowledge that I find astonishing instances, in their works, of approximation to phrenological truth. I consider Physiognomy as an important and highly interesting branch of Phrenology; and it was my original intention to publish a separate volume on this subject; but the circumstance, that some of my pupils have manifested a disposition to make an unjust appropriation of these ideas, induces me to crowd an imperfect sketch of them into this volume.

ORGANS AT DIFFERENT AGES.

The form and size of the organs, both of the head and body, are continually changing; and some organs are largest and most active at certain ages.

In CHILDHOOD, the most active organs among the *Ipsicals*, are II, III, IV, VII, and X. *Socials*, 4th, 6th, 8th, 9th and 12th. *Intellectuals*, 1, 3, 7, 11, and the *Perceptives* generally.

In YOUTH—*Ipsicals*, I, V, XI and XII. *Socials*, 1st becomes developed, and produces a change in the whole character, by its influence upon the other powers. *Intellectuals*, *Perceptives* generally, and 14.

IN MANHOOD—*Ipsseals* generally. *Socials*, 2d, 3d, 5th and 7th. *Intellectuals*, the Reflectives.

IN OLD AGE—*Ipsseals*, VI, VII, and IX. *Socials*, 2d and 7th. *Intellectuals*, Reflectives grow large and the Perceptives small.

There is also a change of temperament. The Digestive and Arterial Systems predominate in childhood, the Muscular and Arterial, in youth, and manhood; and the Osseous and Venous in old age.

The organs in childhood and youth are more yielding, pliable, and elastic. But in old age they are brittle, hard, and inelastic; with a smaller proportion of the liquid elements to the solids.

DIFFERENCE BETWEEN THE SEXES.

The cerebral organization which would constitute a perfect female, would be very imperfect if possessed by a male, and *visa versa*. It is universally admitted, that men and women differ in certain traits; and the phrenologist finds a corresponding difference in their developements of brain. The following is the result of my observations on this subject:

ORGANS LARGEST IN WOMEN.

Intellect—1, 2, 3, 4, 5, 7, 8, 11, 13.

Ipsseals—VI, VII, XI, XII.

Socials—2d, 4th, 6th, 8th, 9th, 11th, 12th.

ORGANS LARGEST IN MEN.

Intellect—6, 9, 10, 14, 15.

Ipsseals—I, II, III, IV, V, X.

Socials—1st, 3d, 5th, 7th.

Some of the organs are omitted, because I have not yet satisfied myself which sex has them largest. There are also differences in temperament, and I think the following will be found generally correct:

LARGEST IN WOMEN.

Nervous System,
Digestive System,
Venous System,
Breadth of Pelvis.

LARGEST IN MEN.

Osseous System,
Muscular System,
Arterial System,
Breadth of Chest.

Men have larger heads and bodies than women; but I am not satisfied whether men have larger heads than women in proportion to their bodies.

RESEMBLANCE TO PARENTS.

I have lately discovered a method by which to ascertain, with tolerable accuracy, which parent an individual most resembles. My attention was first directed to this subject by the fact that great men seldom have sons equal to themselves in talent and energy; and also the well known fact that eminent men generally resemble their mothers. The result of all my observations on this interesting point may be comprised in the following propositions:

1. Those men who have many of the peculiarities of the female developed in a greater degree than ordinary, generally resemble the mother; and those men, on the contrary, who have many of the peculiarities of the male, and are deficient in those that belong to the female, resemble the father.

2. A man who resembles his father, and does not resemble his mother, (health and every thing else equal) is smaller than his father in stature, and has a smaller head. But a man who resembles his mother, and not his father, is frequently taller than his father, and has a larger head. If a man and his wife are both of the ordinary size and proportion, or of such size and proportion as to be proper mates, then their sons that resemble the mother will be the largest—will have the largest heads—the most social dispositions—the greatest fondness for the fine arts, poetry, and romance—the best memories, and the greatest fondness for reading.

3. A woman who resembles her mother, and not her father, is (all else equal) inferior to her mother in size of head and body, and in energy of character: but a woman who resembles her father, is frequently superior, in size and in energy, to her mother.

4. Men who resemble the mother, generally resemble the maternal grandfather; and sometimes the resemblance is even greater to the grandfather, than to either father or mother. Daughters that resemble the father, generally resemble the paternal grandmother.

5. A child may resemble both parents; but the qualities derived from one, may greatly preponderate over those derived from the other; and sometimes one part of the head will bear evidence of being derived from the father, and another from the mother; sometimes, for instance, it is evident that the forehead is derived from the father, and the hind-head from the mother, or the contra. Sometimes the upper front will be evidently derived from the father and the lower from the mother. The qualities of both parents will occasionally be so blended, as to baffle all attempts to judge which parent's likeness predominates; but in most cases, by application of the rules concerning the difference in the sexes, I can easily determine which part of the

head is derived from the father and which from the mother.

6. Men with large heads, and high, full, expansive foreheads, and large VII and 2d, always resemble the mother. They will also be likely to possess the peculiar temperament of females in a greater degree than those who resemble the father only.

7. A man sometimes has many *feminine peculiarities* more than *medium*, and yet resembles his father, (except that he is smaller) but in such a case the father had the feminine peculiarities *uncommonly developed*, and the *father's mother* had them in a *still greater* degree. It must be admitted, however, that we shall be likely to err in our judgment in such instances. The same difficulty occurs when the mother is uncommonly masculine; a daughter that resembles her will appear like those females that resemble the father; and in such a case, the examiner will be likely to be misled. But even in these apparent exceptions to the general rule, it will always be found, that the female who resembles the mother, although quite as masculine as the generality of those females who resemble the father, will yet be less masculine than the mother. And those males who resemble an effeminate father, although quite as feminine as the generality of those who resemble the mother, will yet be less so than the father; and will be smaller in size of head and body than the father.

8. The best constitutions of body and mind, are those which resemble both parents; and it is better (all else equal) that the likeness of the mother should predominate in the son, and of the father in the daughter. It is better still, if the likeness of the maternal grandfather descend to a boy and of the paternal grandmother to a girl. This explains why great men generally resemble their mothers; and also why they seldom have sons equal to themselves.

9. The more the parents resemble each other, the more

probability is there that the children will resemble one parent and not the other. But if the parents differ very much from each other, the children will be more likely to resemble both. This explains why it is improper to marry near blood relations. It has long been known that intermarriages of relations produces degeneracy; but the cause of this has never before been understood. The union of whites and Negroes, almost always produces mullattoes, and the whites and Indians mingle in a similar manner; but among those who intermarry with the same complexion, and nation, and community, and even the same family, and who continue to do so for several generations, if the preceding rules are correct, degeneracy must be the inevitable consequence. It is among these that we most frequently find the children resembling one parent only. But this subject teaches us, that if marriages are consummated between persons who are very much alike in constitution, the consequences will be nearly the same as if they were relations.

There is nothing in the application of the principles of Phrenology which creates so much surprise as the subject under consideration; and perhaps there is no more powerful evidence to the minds of the inexperienced, of the truth of the science. I have frequently been able to give a correct account of the general character of a man whom I have never seen, merely by examining the head of his son.

Let me, in conclusion, caution the practitioner against placing too much reliance upon the assertions of friends and acquaintances, in relation to the resemblance of persons who are present to those who are absent; as I frequently find the most intimate friends mistaken. Whenever it is possible to see for yourself, the best way is to depend only upon observation. I would also advise those who apply phrenology practically, to admit their liabilities, in some doubtful cases, to be mistaken; and when they perceive their mistakes, to

acknowledge them with promptness and candor. The consequence of this honest course, will be, that although some may doubt the infallibility of the science, they will, at least, have confidence in the integrity of its advocate.

RELIGION.

The Deity stands in nearly the same relation to the whole universe, that an absolute sovereign does to his dominions, or that a father does to his children. The difference is, that the attributes of all earthly beings are limited; but those of the Deity are infinite.

Religion consists in directing towards our Heavenly Father, the same 4th, 6th, 8th, 9th, 11th, 12th, and XII that, as children, are exercised towards our earthly parents. It consists in exercising all our Intellectual Faculties to *know* his will, and our Social Propensities to *conform* to it when known—repressing the activity of our 5th and 7th, and our Lower Ipseals. I cannot therefore approve the practice of some well meaning phrenologists who speak of RELIGIOUS ORGANS;—there are no such organs—there are religious *subjects* which are *adapted* to nearly *all* our organs and powers. We investigate the subject of religion with the same faculties with which we do all other subjects;—we give credence to the testimony upon which Christianity is founded, by means of the same 12th that enables us to believe on other subjects. The same 9th that prompts us to submit to our earthly parents and magistrates, induces us to submit to the government of God, and to revere his name; the same 11th to imitate his perfections; 8th to admit the justice of his laws; 6th to desire his approbation; VII to dread his punishment; and XII to hope for his rewards.

ACCOUNTABILITY.

Each organ in the human constitution, has its own peculiar laws, the violations of which are punished by unhappiness, and the observance, rewarded by happiness. The *kinds* of accountability must therefore be as numerous as the organs in the constitution; and the *degrees* of accountability must be proportionate to the size of the organ, and the extent of the violation. The transgression of the laws which regulate the body, is punished by bodily suffering, and this may be denominated *corporeal accountability*.

Moral accountability, as it is commonly understood, would be more properly denominated *social* accountability, since it depends mostly upon the Socials, 8th, 10th and 12th.

Religious accountability, depends principally upon the higher Socials—8th, 9th, 10th, 11th, and 12th, combined with an *intellect* which has received religious *instruction*; and the *degree* of accountability will be in proportion to the natural endowments—the knowledge of the subject—and the extent of the transgression.

CONCLUSION.

Besides giving my own peculiar views, I have endeavored, in this volume, to embody the essential doctrines of eminent phrenologists. But it was impossible to do justice to all their views in detail; I would therefore earnestly recommend to my readers, the perusal of their works, particularly “Combe’s

System of Phrenology," which I consider one of the most elegant works in the English language. This justly popular author, without making any pretensions to originality, has clothed the ideas of Spurzheim in the most beautiful language; and illustrated them in such a manner, as to render them acceptable even to those who do not believe in the science. His "Constitution of Man," bears the same character; it is based upon "Spurzheim's Natural Laws of Man;" a work, which although containing the most sound and original ideas, was fast sinking into neglect, when the vigorous pen of Combe embodied and illustrated the same thoughts, with many useful additions, in such a manner as to win for them an introduction into the library of every intelligent English reader. Mr. Combe is now on a visit to our country, and the manner in which he is received, must be gratifying to every friend of science, as it is certainly honorable to our citizens.

I am happy to know that thousands in this country are daily becoming converts to phrenology; and that among them are now to be found many who are eminent for their moral and intellectual worth. Wherever the science has been fairly investigated, the clamors and sneers of opposition and skepticism, have given way to the murmurs of applause and the smiles of approbation. The institutions of religion, of education, of medical and criminal jurisprudence, and of social and domestic life, are beginning to feel its influence; and man has begun to consider his own constitution as the most important subject of investigation. It is my highest ambition to contribute to produce these results, and such I hope will be the tendency of this volume:

"My task is done." "What is writ is writ—
Would it were worthier."

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